



Exam : 070-529

**Title : TS: Microsoft .NET Framework 2.0 -
Distributed Application Development**

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QUESTION 1

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The access control to Web services is part of your responsibility. To this end you are currently exposing an existing class as an Extensible Markup Language (XML) Web service. You need to ensure that this Web service is accessible exclusively accessible to Web service clients within the Certkiller .com domain. To comply with this requirement you need to change the access modifiers on methods that must be exposed as Web methods.

What should you do?

- A. For each Web method, use the Internal or Friend Access modifier.
- B. For each Web method, use the Private Access modifier.
- C. For each Web method, use the Public Access modifier.
- D. For each Web method, use the Protected Access modifier.

Answer: C

Explanation: Since only Public methods can be exposed as Web methods, you should make use of the Public Access modifier for each Web method.

Incorrect answers:

A: You cannot use the Internal or Friend Access method, only Public Access method can be exposed as Web methods.

B: You cannot use the Private Access method, only Public Access method can be exposed as Web methods.

D: You cannot use the Protected Access method, only Public Access method can be exposed as Web methods.

QUESTION 2

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates a class definition:

Exhibit:

```
public class MarketService
{
    internal string ObtainMarket(string mobilePhoneNumber)
    {
        return string.Empty;
    }
}
```

You received instruction to modify this class so that it becomes a Web service, a

Web service that will allow internal applications to invoke ObtainMarket as a Web method. You need to ensure that the Web method does not make use of session state and that it must make use of the default namespace.

What should you do?

- A. Change the access modifier for the ObtainMarket method to Public.
Then apply the WebService attribute to the MarketService class.
- B. Change the access modifier for the ObtainMarket method to Protected.
Then apply the WebMethod attribute to the ObtainMarket method.
- C. Change the access modifier for the ObtainMarket method to Public.
Then apply the WebMethod attribute to the ObtainMarket method.
- D. Derive the MarketService class from SoapHttpClientProtocol.
Then apply the WebMethod attribute to the ObtainMarket method.
- E. Derive the MarketService class from WebService.
Then apply the WebMethod attribute to the ObtainMarket method.

Answer: C

Explanation: Only public methods can be exposed as Web methods. Thus you need to change the access modifiers to public. And you should also apply the WebMethod attribute to the ObtainMarket method as this attribute will indicate that the public method should be exposed as Web methods.

Incorrect answers:

A: The WebService attribute will allow you to specify the namespace and description for the Web service. This is not required to invoke Web methods. (In cases where no namespace has been specified, use will be made of the default namespace.)

B: Since only Public methods can be exposed as Web methods, you should not change the access modifier to Protected.

D: The SoapHttpClientProtocol base class allows for Web service clients to make SOAP calls to Web methods. This is not what is required.

E: The WebService base class is an optional class as it provides direct access to session and application instances for session state. It is mentioned in this question that the Web methods does not make use of session state.

QUESTION 3

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The following exhibit illustrates the class definition for a data processing Web service:

Exhibit:

```
[WebService(Namespace="urn:DataProcessingService")]
Public class DataProcessingService : Webservice
{
[WebMethod(MessageName="ProcessDataSet")]
Public void Process(DataSet dataset)
```

```
{  
}  
}
```

You have been instructed to apply an attribute to the Process method that will result in an immediate return to the caller without invoking a SOAP response. You need to ensure that the attribute that you apply in your solution is Web Services-Interoperability (WS-1) compliant. You thus need to make use of a code segment.

What should you do?

- A. Use the [OneWay] code segment.
- B. Use the [WebMethod(BufferResponse=false)] code segment.
- C. Use the [WebMethod(BufferResponse=true)] code segment.
- D. Use the [SoapDocumentMethod(OneWay=true)] code segment.
- E. Use the [SoapRpcMethod(OneWay=true)] code segment.

Answer: D

Explanation: If you want the Web method to be WS-1 compliant then you should apply the SoapDocumentMethod attribute to the Process method. Setting the attribute of the OneWay property to true indicates an immediate return to the caller without a response when it is invoked.

Incorrect answers:

A: You should not apply the OneWay attribute to the Process method. This attribute is used with .NET Remoting components when a method should immediately return to the caller without a return value.

B: You should not apply a second Web method. Only one WebMethod attribute can be applied to a Web method. Furthermore, the BufferResponse property of the WebMethod attribute does not determine if execution returns to the caller immediately when the associated method is invoked. It determines whether the entire response is placed in memory before it is sent to the caller. However, in this case no responses should be returned.

C: One does not apply a second Web method as suggested in this option.

E: RPC style is not WS-1 compliant.

QUESTION 4

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com is a Publishing and distribution company and works in joint ventures with many book stores that carries it products.

The provision of stock on hand updates to third party companies (the book stores) forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that provides stock on hand updates. To this end you created a Web method named GetStock that accesses the third party company's XML Web service to retrieve the required information.

Following are some factors that you need to keep in mind:

1. The third parties' XML Web Service updates its information regarding stocks once every hour.

2. Certkiller .com is charged for each call to the third party Web service.

It is thus essential that you limit the number of calls that the Certkiller .com Web service makes to the third party company's Web service:

1. Thus you apply the Webmethod attribute to the GetStock method.

2. You need to configure the attribute to limit the number of calls to the third party Web service.

3. You must ensure that no cookies are required.

What should you do?

A. The CacheDuration property should be set to 3600

B. The EnableSession property should be set to true.

C. The MessageName property should be set to "ClientCache".

D. The BufferResponse property should be set to false.

Answer: A

Explanation

: This property specifies the number of seconds that a response from a Web method should be cached on a server. With this property set to 3600, you will limit the number of calls to the third party Web service by limiting the number of invocations of your GetStock Web method to once every hour.

Incorrect answers:

B: The EnableSession property indicates whether a session should be enabled to the Web method. Server-side session state, which includes the Application and Session objects, can use a lot of memory on the Web server. Session state requires the use of cookies as well. Thus you should not use this property.

C: The MessageName property distinguishes overloaded Web methods. In Web services Description Language (WSDL) documents, each Web method must be named uniquely and the MessageName property is involved in meeting this requirement. This is not what should happen in this scenario.

D: The BufferResponse property determines whether the entire response is placed in memory on the server before it is sent to the Web Service client. You should thus not set this property to false.

QUESTION 5

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The Extensible Markup Language (XML) Web service development forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that contains four Web methods. Each of these four methods accepts a different number of parameters and each method is configured to make use of remote procedure call (RPC) SOAP formatting. You

must ensure that each of these four Web methods is capable of being exposed as a Web method by the Web service.
What should you do?

- A. The SoapDocumentMethod attribute should be applied to each of the four methods. Then set the RequestNamespace property of each attribute to a different value.
- B. The WebService attribute should be applied to the Web service's class. Then set the Namespace property of the attribute to "RPC".
- C. The WebMethod attribute should be applied to each of the four web methods. Then set the MessageName property of each attribute to a different value.
- D. The SoapRpcService attribute should be applied to the Web service's class. Then set the RoutingStyle property of the attribute to SoapServiceRoutingStyleRequestElement.

Answer: C

Explanation: When you overload Web methods, you need to specify a distinct message name for each web method because Web Services Description Language (WSDL) does not support overloaded operations. You thus need to apply the WebMethod attribute to each of the four methods and set the MessageName property of each of these attributes to a different value.

Incorrect answers:

- A: Because the Web methods must make use of RPC formatting, you should apply the SoapRpcMethod attribute to each of the four methods, you cannot apply both a SoapDocumentMethod attribute and a SoapRpcMethods attribute to the same method.
- B: The Namespace attribute of the WebService attribute allows you to designate an XML namespace for the operations that are supported by the Web Service, not to ensure exposure.
- D: Though it is possible to apply the SoapRpcService attribute to the class OR the SoapRpcMethod attribute to each method to support RPC formatting, it does not allow for overloaded methods to be exposed as Web methods. In this case the methods are already configured to make use of RPC formatting which actually indicates that one of the two attributes is already applied.

QUESTION 6

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates a class definition in a Web service project:

Exhibit:

```
public class MarketService
{
    public Point ObtainMarket(string mobilePhoneNumber)
    {
```



```
throw new soapException("Not implemented", New  
XmlQualifiedName("error"));  
}  
}
```

You have received instruction to configure the class in such a way so as to allow SOAP clients to invoke the ObtainMarket method.

What should you do?

- A. The class should be derived from WebService.
- B. The class should be derived from SoapHttpClientProtocol.
- C. The WebMethod attribute should be applied to the method.
- D. The WebService attribute should be applied to the class.

Answer: C

Explanation: The Webmethod attribute applied to the method will indicate that a public method should be exposed as a Web method of a Web service. Thus you should apply the WebMethod attribute to the method.

Incorrect answers:

- A: Since the WebService base class is optional, and it provides direct access to the Session and Application instances, you should not derive the class from WebService.
- B: You should derive a proxy class from this class in a SOAP client application. This will allow the client application to make SOAP calls via the proxy class to the Web service. Thus you should not derive the class from SoapHttpClientProtocol.
- D: The WebService attribute will allow you to specify a namespace and description for the Web service; you should not apply the WebService attribute to the class.

QUESTION 7

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates a configuration.

Exhibit:

```
<?xml version="1.0"?>  
<dynamicDiscovery  
  xmlns="urn:schemas-dynamicdiscovery:disco.2007.02.19">  
  <exclude path="_vti_cnf" />  
  <exclude path="_vti_pvt" />  
  <exclude path="_vti_log" />  
  <exclude path="_vti_script" />  
  <exclude path="_vti_txt" />  
  <exclude path="Web References" />  
</dynamicDiscovery>
```

You have just added the above configuration to a new file by means of using a text

editor. You need to save this file to a production server to provide the Web service discovery.

What should you do?

- A. Use the .disco extension to save the file.
- B. Use the .vsdisco extension to save the file.
- C. Use the .wsdl extension to save the file.
- D. Use the .asmx extension to save the file.

Answer: B

Explanation: Dynamic discovery documents are denoted by a file with .vsdisco extension. This will allow the Web service client to discover all Web services that exist at and below the virtual directory that contains the document. You should thus save the file using a .vsdisco extension.

Incorrect answers:

A: The .disco extension is used to denote a static discovery document. This will not suffice under the circumstances.

C: The .wsdl extension represents files what are Web Services Description Language (WSDL) documents. You should not make use of this extension to save the file to the production server.

D: The .asmx extension represents a Web service endpoint. These types of files thus so not allow for dynamic discovery.

QUESTION 8

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

After receiving instruction you have just finished developing an ASP.NET Web application named WebServices. WebServices contains the Web services for each of the Certkiller .com clients. Microsoft Internet Information Services (IIS) 6.0 is hosting the Web application. And the Web application is configured in such a way so as to map host header names to client-specific virtual directories. Each Certkiller .com client has its own virtual directory. These virtual directories are located in a root virtual directory named WebServices.

The following exhibit illustrates an example of the virtual directory structure:

Exhibit:

WebSite

WebServices (Web Application)

Client A (VirtualDirectory)

WebService1.asmx

WebService2.asmx

Client B (VirtualDirectory)

WebService3.asmx

WebService4.asmx

Client C (VirtualDirectory)

WebService5.asmx

WebService6.asmx

You received further instructions to ensure that all Certkiller .com clients have the ability to discover all of the Web services that are implemented in the Web application for that client. You need to accomplish this task while also making provision for those Web services that is intended for future implementation.

However, you also need to ensure that the Certkiller .com clients should not have the ability to discover implemented Web services intended for other clients.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. A .vsdisco file should be added to each Certkiller .com client's virtual directory.
- B. A .disco file should be added to each Certkiller .com client's virtual directory.
- C. Both a .vsdisco and a .disco file should be added to the WebServices directory
- D. No .vsdisco or .disco files should be placed in the WebServices directory.
- E. A .vsdisco file should be placed in the WebServices directory.

Answer: A, D

Explanation: A file with a .vsdisco extension will allow for dynamic discovery. This will result in the Certkiller .com clients having the ability to discover all the Web services that exist at and below the virtual directory that contains the document. This means that each client will be able to discover all Web services that exist at and below its own virtual directory.

Incorrect answers:

B: You should not place a .disco file to each Certkiller .com client's virtual directory because this is a static discovery document. You should manually specify the Web services that should be discovered in this document and the clients will then not be able to automatically discover the Web services that will be added in the future.

C: You should not place a .disco or a .vsdisco file in the WebServices directory. This will result in the violation of one of the requirements in the questions that states the no one Certkiller .com client should be able to discover Web services that are not intended for that specific client.

E: You should not place a .vsdisco file in the WebServices directory because you do not want the Certkiller .com clients to be able to discover the Web services that are not implemented for them.

QUESTION 9

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

After receiving instructions you have just completed the development and the

deployment of an Extensible Markup Language (XML) Web service application. This XML Web service application contains ten (10) Web services. At present dynamic discovery on the Web server that hosts the application has been disabled. To this end you now need to configure the Web.config file of the application to allow Web service clients the ability to dynamically discover all the Web services. You also want to ensure that the Web service clients will be able to discover any future Web services that will be added. What should you do? (Choose the correct configuration.)

A. <configuration>
<system.web>
<httpHandlers>
<add verb="x"path="x.disco"
Type="System.Web.Services.Discovery.DiscoveryRequestHandler,
System.Web.Services,Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"
validate="false"/>
</httpHandlers>
</system.web>
</configuration>

B. <configuration>
<system.web>
<httpHandlers>
<add verb="x"path="x.vsdisco"
type="System.Web.Services.Discovery.DiscoveryRequestHandler,
System.Web.Services,Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"
validate="false"/>
</httpHandlers>
</system.web>
</configuration>

C. <configuration>
<system.web>
<httpHandlers>
<add verb="x"path="x.wsdl"
Type="System.Web.Services.Discovery.DiscoveryRequestHandler,
System.Web.Services,Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"
validate="false"/>
</httpHandlers>
</system.web>
</configuration>

D. <configuration>
<system.web>
<httpHandlers>
<add verb="x"path="x.asmx"

```
type="System.Web.Services.Discovery.DiscoveryRequestHandler,  
System.Web.Services,Version=2.0.0.0,  
Culture=neutral,PublicKeyToken=b03f5f7f11d50a3a"  
validate="false"/>  
</httpHandlers>  
</system.web>  
</configuration>
```

Answer: B

Explanation: An Http handler should be added for all .vsdisco files. DiscoveryRequestHandler is the default handler class in ASP.NET 2.0. A file with the .vsdisco extension will allow a Web service client to dynamically discover all Web services that exist at and below the virtual directory that contains the document.

Incorrect answers:

A: A .disco file extension denotes a static discovery document. You will need to manually specify the Web services that should be discovered in this document. This will result in clients being unable to automatically discover the Web services that will be added in future.

C: A .wsdl handler denotes a Web Services Description Language (WSDL) document. This type of file will not provide for dynamic discovery of Web services.

D: An .asmx handler denotes a Web service endpoint and will thus not provide clients with the ability to automatically discover Web services.

QUESTION 10

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

After receiving instructions, you have just finished developing and deploying public and private Extensible Markup Language (XML) Web services to a production server. This production server has been configured with Microsoft Internet Information Services (IIS) 6.0. The Web services are located on different IIS virtual directories. Each of these IIS virtual directories hosts either public Web services or private Web services, but not both. Part of the instructions that you received also states that Web service clients must have the ability to discover the public Web services dynamically, but not the private Web services. The Web Service clients should also be granted the ability to dynamically discover any new public Web services that are added to an existing virtual directory.

To this end you now need to configure the server to meet these requirements. You should take care that your configuration does not prevent the discovery of Web services in new virtual directories unless you reconfigure the server.

What should you do? (Each correct answer presents part of the solution. Choose three.)

- A. Add a .disco file to the Web site's virtual root directory.
- B. Add a .vsdisco file to the Web site's virtual root directory.
- C. Do not add .vsdisco files anywhere on the server.
- D. Add the .vsdisco files to each virtual root directory that exposes public Web services.
- E. Configure the .disco file with reference to each public Web service.
- F. Configure the .disco file with reference to each .vsdisco file.

Answer: A, D, F

Explanation: You need to add a static discovery document, i.e. a .disco file to the IIS root directory and dynamic discovery documents, i.e. .vsdisco files to each virtual directory that exposes public Web services. This way you can ensure that Web service clients have the ability to only discover the public Web services.

Incorrect answers:

- B: You should not add .vsdisco files to the IIS root directory.
- C: Adding a .vsdisco file anywhere on the server will expose the private Web services.
- E: .disco files should not be configured to reference to each public Web service. This means that Web clients will not be able to not automatically discover new Web services that are added to existing virtual directories.

QUESTION 11

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The ASP.NET Web application development forms part of your responsibilities at Certkiller .com. You are currently developing an ASP.NET Web application that contains three Web services and eight Web pages. You further received instructions to deploy the application to a production server named Certkiller -SR03. You need to ensure that no human-readable code is stored on the Web server when you deploy the application.

What should you do?

- A. The Web Application should be built in Visual Studio 2005.
Copy only the files in the bin folder to the production server using the XCOPY command.
- B. The Web application should be copied to Certkiller -SR03 using the Visual Studio 2005 Copy Web Site tool.
Select the option to copy only the files required to run the application.
- C. The Web application should be published to Certkiller -SR03 using the Visual Studio 2005 Publish Web Site tool.
Unselect the checkbox that enables the "allow the precompiled site to be updatable" option.
- D. The Web application should be published to Certkiller -SR03 using the Visual Studio 2005 Publish Web Site tool.
Select the checkbox that enables the "allow the precompiled site to be updatable" option.

Answer: C

Explanation: Publishing the Web application to Certkiller -SR03 will allow Visual Studio 2005 to precompile the application. Further you should also unselect the option that allows the precompiled site to be updatable. This will indicate that files with extensions like .aspx and .asmx should be precompiled and unavailable in human-readable form.

Incorrect answers:

- A
: Making use of the XCOPY command will yield Web pages that will contain human readable code. By default, the assemblies in the bin folder correlate with declarative code in Web pages, which are not copied to the bin folder during compilation. This will require that you copy the Web pages as well.
- B: You cannot precompile Web pages into assemblies using the Copy Web Site tool. Besides Web pages contains human readable code.
- D: When you select the option to allow precompiled site to be updatable, then the Web pages will exist on the Web server and Web pages contains human readable code.

QUESTION 12

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Web Service applications forms part of your responsibilities at Certkiller .com. You have just developed an Extensible Markup Language (XML) Web service application by making use of Microsoft Visual Studio 2005. Now you need to deploy the project that contains the application to another computer on the Certkiller .com network. The other computer intended to have the project deployed does not have Microsoft Internet Information Services (IIS) 6.0 installed. However, you need to deploy the project. What should you do?

- A. Make use of the Copy Web Site utility and specify the file share location for the remote Web service application.
- B. Make use of the Publish Web Site utility and specify the URL for the remote Web service application.
- C. Make use of the Publish Web Site utility and specify the file share location for the remote Web service application.
- D. Make use of the Copy Web Site utility and specify the URL for the remote Web service application.

Answer: A

Explanation: Using the Copy Web Site utility and specifying the file share location for the remote Web service application will allow you to copy the project to a folder on the computer that does not have IIS 6.0 installed, by using the local file system; the project is

simply the collection of the relevant files in the Web application's folder.

Incorrect answers:

B: The Publish Web site utility is not used to copy projects, but rather to copy the application's runtime files.

C: The Publish Web site utility is not used to copy projects, but rather to copy the application's runtime files.

D: If you specify the URL for the remote Web service application, you would require Front Page Server Extensions to be installed on the target computer. But in the question it is already mentioned that the target computer does not have IIS installed.

QUESTION 13

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as a credit bureau.

The development of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will allow legitimate third parties to access credit scores, pull credit records, and update credit information for customers. You need to implement a Web method named ObtainCreditScore. ObtainCreditScore should accept a String parameter and return an integer. You need to make use of Remote Procedure Call (RPC) style for this Web method; you also need to make use of the Document style for all Web methods that will be implemented. To this end you need to make use of the appropriate code segment for the Web service.

What should you do?

A. [WebService(Namespace="urn: Certkiller ")]
[SoapRpcService]
public class CreditService
{
[WebMethod]
public int ObtainCreditScore(string customerIdentifier)
{
return 0;
}
}

B. [WebService(Namespace="urn: Certkiller ")]
public class WebService
{
[SoapRpcMethod]
public int ObtainCreditScore(string customerIdentifier)
{
return 0;
}
}


```
C. [WebService(Namespace="urn: Certkiller ")]
public class CreditService
{
    [WebMethod]
    [SoapRpcMethod]
    public int ObtainCreditScore(string customerIdentifier)
    {
        return 0;
    }
}

D. [SoapRpcService]
public class WebService
{
    [WebMethod]
    [SoapRpcMethod]
    public int ObtainCreditScore(string customerIdentifier)
    {
        return 0;
    }
}
```

Answer: C

Explanation: the WebMethod and SoapRpcMethod attributes should be added to the ObtainCreditScore Web method. The WebMethod attribute in essence makes the method accessible by Web service clients. And the SoapRpcMethods instructs the Web Services Description Language (WSDL) generator to set the style attribute to Rpc for the ObtainCreditScore operation element.

Incorrect answers:

A, B: You must not apply the SoapRpcService attribute to the class because it will instruct the WSDL generator to set the style attribute to rpc instead of document style.
D: The WebMethod attribute and NOT the SoapRpcService attribute should be applied to the ObtainCreditScore method to make the method accessible to the Web service clients.

QUESTION 14

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web Service named MarketService. This MarketService will be used by the Certkiller .com Marketing department. You are now required to create a Web method named ObtainMarket. The ObtainMarket Web method must return global positioning system (GPS) coordinates of a mobile phone given a mobile phone number.

In you development of the ObtainMarket Web method, you must ensure that it can be uniquely identified among all the Web services that are implemented by the Sales and Transport departments.

What should you do? (Choose the correct code segment.)

A. [WebService(Name="MarketService")]
public class MarketService : WebService
{
[WebMethod(MessageName="urn:gov:dot:MarketServices")]
public string ObtainMarket(string mobilePhoneNumber)
{
return string.Empty;
}
}

B. [WebService(Namespace="urn:gov:dot:MarketServices")]
public class MarketService : WebService
{
[WebMethod]
public string ObtainMarket(string mobilePhoneNumber)
{
return string.Empty;
}
}

C. [WebService(Name="MarketService")]
public class LocationService : WebService
{
[WebMethod]
public string ObtainMarket(string mobilePhoneNumber)
{
return string.Empty;
}
}

D. [WebService]
public class LocationService : WebService
{
[WebMethod(MessageName="urn:gov:dot:LocationServices")]
public string ObtainMarket(string mobilePhoneNumber)
{
return string.Empty;
}
}

Answer: B

Explanation

: The namespace property of the WebService attribute should be set to a name that is

unique within the organization. When WSDL is generated for the Web service, it will define the request and response messages that are associated with a Web method to be part of the namespace that you set, thus ensuring unique messages.

Incorrect answers:

A: The MessageName property allows you to uniquely identify an overloaded Web method, thus you should not set the MessageName property of the Web Method.

C: The Name property allows you to change the name of the WSDL element that represents the Web service, thus the name property should not be set to uniquely identify the Web method.

D: The MessageName property allows you to uniquely identify an overloaded Web method, thus you should not set the MessageName property of the Web Method.

QUESTION 15

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates the class definition that currently exists for a Web Service.

Exhibit:

```
[WebService(Namespace="urn:gov:DOT()
[SoapRpcService]
public class LicenseService : WebService
{
[WebMethod]
[SoapRpcMethodAttribute(Binding="Default")]
public void ValidateLicense(string state, string licenceNumber)
{
}
[WebMethod]
[SoapRpcMethodAttribute(Binding="Atlanta")]
public int ObtainPoints(string licenseNumber)
{
return 0;
}
}
```

You received instruction to apply the WebServiceBinding attribute to support the Web Service.

What should you do?

A. A WebServiceBinding attribute should be applied to the class.

Set the Attribute's Name property to Atlanta.

B. A WebServiceBinding attribute should be applied to the ObtainPoints method.

Set the Attribute's Name property to Atlanta.

C. Two WebServiceBinding attributes should be applied to the class.

Set the Name property of the one attribute to Default and the other to Atlanta.
D. A WebServiceBinding attribute should be applied to the ValidateLicense method.
Set the attribute's Name property to Default.
A WebServiceBinding attribute should be applied to the ObtainPoints method.
Set the attribute's Name property to Atlanta.

Answer: C

Explanation: It is possible to associate multiple bindings with a Web Service by means of multiple WebServiceBinding attributes. Each binding can have a set of operations. Since the SoapRpcMethod attribute that is applied to the ValidateLicense method has its binding set to Default, you should add a corresponding WebServiceBinding attribute to the class. The Binding property of the SoapRpcMethod attribute must map the Name property of the WebServiceBinding attribute. This will indicate that the ValidateLicense Method, is part of a binding named Default. In the same way you should set the Name property of the second WebServiceBinding attribute to Atlanta.

Incorrect answers:

A: Bindings should be defined at the class or Web service level and thus you should not apply a WebServiceBinding attribute to a Web method because a Web method can only indicate the binding to which it is associated.

B: A Webservice class that does not have a WebServiceBinding attribute applied has a default binding. The name of a default binding is usually the name of the Web service appended to the word "Soap". In this case the default binding is named LicenseServiceSoap. Thus you should not apply a single attribute to the class.

D: You should rather have the WebServiceBinding attribute applied to the class and not to the Web methods.

QUESTION 16

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The implementation of trace listeners forms part of your responsibilities at Certkiller .com. You are currently busy implementing a custom trace that logs errors and warnings in a Microsoft SQL Server 2005 database. The custom trace implementation must allow individual applications to determine whether errors or warnings should be logged at a given time. To this end you install the assembly that contains the trace listener in the global assembly cache (GAC) on an application server.

You need to enable all Web services on the application server to use the trace listener by default. You should ensure that your solution does not force Microsoft Windows Forms applications that run on the server to use the trace listener.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. The trace listener should be added to the Web.config file for each Web service.
- B. The trace listener should be added to the global Web.config file.

- C. The trace listener should be added to the machine.config file.
- D. Specify trace switches for each Web service in the Web.config file.
- E. Specify trace switches in the machine.config file.

Answer: B, D

Explanation: The global Web.config file contains the configuration settings for all the Web applications on a computer. When the trace listener is added to the global Web.config file you will enable all Web services on the application server to use the trace listener by default. You should also specify trace switch settings in the Web.config file for each web service. This in turn will allow you to determine if errors or warnings are logged to the database on a per Web service basis.

Incorrect answers:

- A: You should not add the trace listeners to the Web.config file for each Web service. You should enable the trace listener setting by default which can be done by changing the global Web.config file.
- C: The trace listener should not be added to the machine.config file. It will cause the Windows Forms to inherit the settings by default because the machine.config file contains configuration settings for all applications on a computer.
- E: You should not specify trace switches in the machine.config file. Each Web service must define the switches to control whether errors or warnings are logged for that Web service.

QUESTION 17

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The deployment of Web services forms part of your responsibilities at Certkiller .com.

You are currently busy copying a Microsoft Extensible Markup Language (XML) Web Service from a development server using the Copy Web Site tool. You then discover that in the event of users navigating to

<http://www.Certkiller.zzz/LocationService.asmx>, they encounter an exception message in their browsers as follows:

Request format is unrecognized.

However, the message is not displayed when you test the Web service from a development server. When users navigate to this page, they should be able to view the automatically generated ASP.NET runtime Help page. You now need to ensure that users will be able to view the Help page without interfering with the deployment of other Web services on the production server.

What should you do?

- A. You should add

<configuration>

<system.web>

<webServices>

<wsdlHelpGenerator href="#WSDL"/>

```
</webServices>
```

```
<system.web>
```

```
</configuration>
```

to the machine.config file on the Web server.

B. You should add

```
<configuration>
```

```
<system.web>
```

```
<webServices>
```

```
<wsdlHelpGenerator href="#WSDL"/>
```

```
</webServices>
```

```
<system.web>
```

```
</configuration>
```

to the Web.config file on the Web server.

C. You should add

```
<configuration>
```

```
<system.web>
```

```
<webServices>
```

```
<protocols>
```

```
<add name="Documentation"/>
```

```
</protocols>
```

```
</webServices>
```

```
<system.web>
```

```
</configuration>
```

to the Web.config file for the Web service.

D. You should add

```
<configuration>
```

```
<system.web>
```

```
<webServices>
```

```
<protocols>
```

```
<add name="Documentation"/>
```

```
</protocols>
```

```
</webServices>
```

```
<system.web>
```

```
</configuration>
```

to the machine.config file on the Web server.

Answer: C

Explanation

: the Documentation protocol should be added to the collection of protocols supported by ASP.NET Web services. This will allow the ASP.NET runtime to display a Help page when navigating to a Web service in a Web browser. If the Documentation protocol is disabled in either the machine.config file or the Web.config file for a Web application, the exception message will be displayed. Because this problem occurs on the production Web server and not the development Web server, the machine.config file must be configured to disallow the Documentation protocol.

Incorrect answers:

A: You should not set the WSDL Help generator page by setting the href attribute of the HelpGenerator element. This element allows you to specify a custom Help page rather than the automatically generated one. Furthermore this is the wrong location to be adding this configuration.

B: You should not set the WSDL Help generator page by setting the href attribute of the HelpGenerator element. This element allows you to specify a custom Help page rather than the automatically generated one.

D: The Documentation protocol should not be added in the machine.config file. In such a case it will affect the other Web services that are running on the production web server, especially since the question requires you to disallow the Documentation protocol for all the other Web services.

QUESTION 18

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will be accessed by SOAP clients. To this end you need to specify the parameter formatting to result in a Web service that is Web Services Interoperability (WS-1) compliant.

What should you do?

- A. Make use of Remote Procedure Call (RPC)-literal formatting.
- B. Make use of Document-literal formatting.
- C. Make use of Remote Procedure Call (RPC)-encoded formatting.
- D. Make use of Document-encoded formatting.

Answer: B

Explanation: You need to make use of the document-literal Web method with wrapped parameter styles to comply with the WS-1 standard.

Incorrect answers:

A: RPC formatting always encapsulates parameters as elements within a single body element. The WS-1 standard does not support RPC formatting.

C: RPC formatting is not supported in the WS-1 standard, whether it is in literal or encoded form.

D: You should not make use of document-encoded formatting. This indicates that the parameter elements must explicitly specify their types and it does not comply with the WS-1 standard.

QUESTION 19

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and

customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web service. This XML Web service is intended to allow the traffic department to perform driver license verifications. To this end you created the following Web method:

Exhibit:

```
<WebMethod(>
public void VerifyLicence(string state, string licenseNumber)
{
}
```

You need to apply an attribute to the method to specify the parameter style and formatting that is expected from SOAP clients. You should take care that the XML Web Service that you are developing is Web Services Interoperability (WS-1) compliant.

What should you do? (Choose the correct code segment.)

- A. [SoapDocumentMethod("urn:gov:DOT", Use=SoapBindingUse.Encoded, ParameterStyle=SoapParameterStyle.Bare)]
- B. [SoapDocumentMethod("urn:gov:DOT", Use=SoapBindingUse.Literal, ParameterStyle=SoapParameterStyle.Wrapped)]
- C. [SoapRpcMethod("urn:gov:DOT",Use=SoapBindingUse.Encoded)]
- D. [SoapRpcMethod("urn:gov:DOT",Use=SoapBindingUse.Literal)]

Answer: B

Explanation: To ensure that you comply with the WS-1 standard, you need to make use of document-literal Web methods with wrapped parameter styles. Thus you need to use a SoapDocumentMethod attribute with its Use property set to SoapDocumentUse.Literal and its parameter style property should be set to SoapParameterStyle.Wrapped. Literal in SoapDocumentUse.Literal means that literal formatting should be used. Thus the parameter elements do not need to explicitly specify their types because the elements are included in the definition section of the Web Services Description Language (WSDL) document.

Incorrect answers:

A: The SoapParameterStyle should not be set to Bare as it indicates that parameters can exist as immediate children of the body element in the SOAP request. Furthermore, it does not comply with WS-1 standards.

C: You should not set the Use Property of the SoapDocument method to Encoded because this would indicate that parameter elements must explicitly specify their types. And it does not comply with WS-1 standards.

D: You should not make use of the SoapRpcMethod attribute since the WS-1 standard does not support the RPC style. And RPC always encapsulates parameters as elements within a single body element.

QUESTION 20

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will allow Certkiller .com to locate the delivery trucks that it provides to companies. The Web service clients will send a similar request to the one illustrated below:

Exhibit:

```
<soap:envelope>
<soap:body>
<GetLocation xmlns="urn:gov:DOT">
<mobilePhoneNumber>000-000-0000</mobilePhoneNumber>
</GetLocation>
</soap:body>
</soap:envelope>
```

To this end you need to configure the attribute to enable it to support the SOAP request.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. Set the Use property to SoapDocumentUse.Literal.
- B. Set the Use property to SoapDocumentUse.Encoded.
- C. Set the ParameterStyle property to SoapParameterStyle.Bare.
- D. Set the ParameterStyle property to SoapParameterStyle.Wrapped.

Answer: A, D

Explanation: SoapDocumentUse.Literal indicates that literal formatting should be used.

Thus parameter elements do not have to explicitly specify their types because the elements will then be included in the definitions section of the WSDL document.

SoapParameterStyle.Wrapped indicates that the parameter elements must exist within a single child element of the body element. This can be seen in the illustration that indicates that the mobilePhoneNumber parameter element does not explicitly define its type, and that it exists as a child element of an element that is named GetLocation, which in turn is a child of the body element.

Incorrect answers:

B: You should not set the Use property to SoapDocumentUse.Encoded as it indicates that parameter elements must explicitly specify their types.

C: You should not set the ParameterStyle property to SoapParameterStyle.Bare as it indicates that parameter may exist as immediate children of the body element in the SOAP request.

QUESTION 21

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will allow Certkiller .com to locate the delivery trucks that it provides to companies. The Web service clients will send a SOAP similar to the one illustrated below:

Exhibit:

```
<soap:envelope>
<soap:body>
<mobilePhoneNumber xmlns="urn:gov:DOT">000-000-0000</mobilePhoneNumber>
</soap:body>
</soap:envelope>
```

To this end you create a Web method named GetLocation and apply the appropriate SoapDocumentMethod attribute to this method. Now you need to configure the attribute to enable it to support the SOAP request.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. Set the Use property to SoapDocumentUse.Literal.
- B. Set the Use property to SoapDocumentUse.Encoded.
- C. Set the ParameterStyle property to SoapParameterStyle.Bare.
- D. Set the ParameterStyle property to SoapParameterStyle.Wrapped.

Answer: A, C

Explanation: SoapDocumentUse.Literal indicates that literal formatting should be used. Thus parameter elements do not have to explicitly specify their types because the elements will then be included in the definitions section of the WSDL document. SoapParameterStyle.Bare as it indicates that parameter may exist as immediate children of the body element in the SOAP request. This can be seen in the illustration that indicates that the mobilePhoneNumber parameter element does not explicitly define its type, and that it exists as a child element of the body element.

Incorrect answers:

B: You should not set the Use property to SoapDocumentUse.Encoded as it indicates that parameter elements must explicitly specify their types.

D: You should not set the ParameterStyle property to SoapParameterStyle.Wrapped indicates that the parameter elements must exist within a single child element of the body element.

QUESTION 22

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web service. This XML Web service is intended to allow the traffic department to perform driver license verifications in particular geographic areas. To this end you created the following Extensible Markup Language (XML) Web Service class definition as illustrated in the exhibit.

Exhibit:

```
[WebService(Namespace="urn:gov:DOT")]
public class LicenseService : WebService
{
    private licenceVerifier _LicenseVerifier = new LicenseVerifier();
    <WebMethod>
    public bool VerifyLicense(String state, String licenseNumber)
    {
        bool isValid = _licenseVerifier.Verify(state, licenseNumber);
        if (!isValid)
        {
            ArrayList invalidLicenses = (ArrayList) Application["InvalidLicenses"]
            invalidLicenses.Add(licenseNumber);
        }
        return isValid;
    }
    [WebMethod]
    public String[] ObtainRecentInvalidLicenseHistory()
    {
        ArrayList invalidLicenses = (ArrayList) Application["InvalidLicenses"]
        return (string[]) invalidLicenses.ToArray(typeof(String));
    }
}
```

The VerifyLicence Web method will verify an individual's driver license in a particular geographic area.

The ObtainRecentInvalidLicenseHistory will return a list of all the driver licenses that has been revoked regardless of geographic area.

You are required to modify the two Web methods so as to prevent them from throwing exception of type NulReferenceException.

What should you do?

- A. Create an instance of ArrayList if there is no ArrayList in the Application object.
- B. Store and retrieve the ArrayList instance to and from the Session object.
- C. Serialize and deserialize the items in the ArrayList instance using the XmlSerializer class.
- D. In each Web method create an instance of LicenseVerifier.

Answer: A

Explanation

: The application object holds the state information for the Web service and is thus not

client-specific. Also if the Application does not have a certain value for the InvalidLicenses key, a null reference (Nothing) is returned. If you try to access members of a null reference, an exception of type NulReferenceException is thrown. Thus you should create an instance of ArrayList if one does not exist in the Application object.

Incorrect answers:

B: The Session object holds state information for each client that is connected to the Web service. This means that the GetRecentInvalidLicenseHistory method will only return licenses that were rendered invalid by a particular Web service client. This you should not store and retrieve the ArrayList instance to and from the Session object.

C: The XmlSerializer allows one to desrialiae and deserilaize an object to and from XML. The GetRecentInvalidLicenseHistory method returns a String Array which is supported by Web Services Description Language (WSDL). Thus you should not serialize and deserialize the items in the ArrayList instance using the XmlSerializer class

D: A LicenseVerifier instance is created during the construction of the LicenseService class and this construction takes place after the Web method is called due to Web services being inherently stateless. Thus you should not create an instance of LicenseVerifier in each Web method.

QUESTION 23

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a real estate and property management company.

A class named PropertyManagement holds a shared method named ObtainProperties. ObtainProperties is configured to accept a String parameter that identifies a client and return a DataSet instance that holds all the properties that are managed by that client. The client identifier is a Microsoft Windows Active Directory user name.

You received instruction to create an Extensible Markup Language (XML) Web Service that makes use of Windows Authentication to expose this functionality to the Internet. However, you need to ensure that your solution also enhances the Web server performance. To this end you need to save the property results in memory on the Web server.

What should you do? (Choose the correct code segment.)

```
A. public class PropertyManagementService
{
[WebMethod(EnableSession:=True)]
public DataSet ObtainProperties()
{
Dataset dataSet = (DataSet) Session["Properties"];Nothing
if (dataSet == null)
{
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name);
```



```
Session("Properties") = dataSet;  
}  
return dataSet;  
}  
}
```

```
B. public class PropertyManagementService : WebService  
{  
[WebMethod(EnableSession=True)]  
public DataSet ObtainProperties()  
{  
Dataset dataSet = (DataSet)Session["Properties"];  
if (dataSet == null)  
{  
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name);  
Session["Properties"] = dataSet;  
}  
return dataSet;  
}  
}
```

```
C. [WebService]  
public class PropertyManagementService : WebService  
{  
[WebMethod]  
public DataSet ObtainProperties()  
{  
Dataset dataSet = (DataSet) Application["Properties"];  
if (dataSet == null)  
{  
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name);  
Application("Properties") = dataSet;  
}  
return dataSet;  
}  
}
```

```
D. [WebService]  
public class PropertyManagementService  
{  
[WebMethod]  
public DataSet ObtainProperties()  
Dataset dataSet = (DataSet)Application["Properties"];  
if (dataSet == null)  
{  
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name);  
Application["Properties"] = dataSet;  
}  
return dataSet;
```

```
}  
}
```

Answer: B

Explanation: The Web service class should be derived from the WebService, set the EnableSession property of the WebMethod attribute to true and use the Session object to save and retrieve properties. The session object holds information for each client that is connected to the Web service. This in turn will allow the results to be saved in memory on a per-client-basis. The base WebService class provides access to the Session object and the EnableSession property will indicate that the Web method makes use of the Session object.

Incorrect answers:

A: The Web service class must be derived from the Web service because the WebService class provides access to the Session object.

C: The Application object should not be used to store and retrieve information. This object holds the state information for the Web service and is thus not client specific.

D: The Application object should not be used to store and retrieve information. This object holds the state information for the Web service and is thus not client specific.

QUESTION 24

You work as the Microsoft.NET developer at Certkiller .com. Certkiller .com operates as an agency that specializes in the placement of various breeds of pedigreed animals, servicing at least ten different countries on two continents. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will return biological images in SOAP messages. Due to the size of these messages, you decided to create a class named CompressionSoapExtension to compress the SOAP responses. You thus need to implement the ProcessMessage method to encrypt the SOAP responses.

What should you do?

A. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.BeforeDeserialize.

B. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.BeforeSerialize.

C. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.AfterDeserialize.

D. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.AfterSerialize.

Answer: D

Explanation: You should compress the message if the Stage property of the SoapMessage instance is set to SoapMessageStage.AfterSerialize. The Stage property represents the stage in serialization and deserialization process of a SOAP message. At this stage, the Web method has been invoked and the output parameter and return value have been fully serialized into an XML message. This will allow you to compress the message before it is sent back to the Web service client.

Incorrect answers:

A: If you set the Stage property of the SoapMessageStage.BeforeDeserialize, then the input parameters to a Web method would not be deserialized into input parameters.

B: If you set the Stage property of the SoapMessageStage.BeforeSerialize, then the Web method will be invoked, but the output parameters and return value will not have been serialized into an XML message.

C: If you set the Stage property of the SoapMessageStage.AfterDeserialize, then the input parameters to the Web method will be serialized into input parameters, but the Web method would not yet have been invoked.

QUESTION 25

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as a pharmaceutical company with many branch offices that are located worldwide. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You have just developed and deployed an Extensible Markup Language (XML) Web Service that will allow for the exchange of encrypted SOAP messages between the different Certkiller .com branch offices. The assembly that contains the Web service also contains a SOAP extension class named EncryptionExtension that encrypts the SOAP messages. Due to the size of some of the messages, you implemented a second SOAP extension class named CompressionExtension that compresses SOAP messages. This class exists in the SoapUtilities namespace in an assembly named SoapUtilities.dll

You must modify the Web.config file for the Web service to ensure that compression occurs after encryption.

What should you do? (Choose the correct configuration from the given options.)

A. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="0"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

B. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

C. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="2"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

Answer: C

Explanation: You can either apply a SoapExtension-derived attribute to a Web method or specify the SOAP extension in the Web.config file when configuring a Web service to use SOAP extensions. When specified in the Web.config file, the extension is executed for all Web methods defined for the Web service. The execution processing order of SOAP extensions are:

1. All SOAP extensions that are members of group 0 are executed.
2. All SOAP extensions that are specified declaratively as attributes are executed.
3. All SOAP extensions that are members of group 1 are executed.

Incorrect answers:

A, B, C: You should not set the group number to 0 as it will result in compression to occur before encryption.

QUESTION 26

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

Certkiller .com operates as a pharmaceutical company with many branch offices that are located worldwide.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You have just developed and deployed an Extensible Markup Language (XML) Web Service that will allow other companies to submit encrypted SOAP messages to Certkiller .com. The assembly that contains the Web service also contains a SOAP extension class named EncryptionExtension that decrypts the SOAP messages that represents the medical records. Due to the size of some of the messages, you implemented a second SOAP extension class named CompressionExtension that decompresses compressed SOAP messages. This class exists in the SoapUtilities namespace in an assembly named SoapUtilities.dll

You must modify the Web.config file for the Web service to ensure that decompression occurs before decryption.

What should you do? (Choose the correct configuration from the given options.)

A. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="0"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

B. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

C. <configuration>

```
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="2"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
```

Answer: C

Explanation: You can either apply a SoapExtension-derived attribute to a Web method or specify the SOAP extension in the Web.config file when configuring a Web service to use SOAP extensions. When specified in the Web.config file, the extension is executed for all Web methods defined for the Web service. The execution processing order of SOAP extensions are:

1. All SOAP extensions that are members of group 0 are executed.
2. All SOAP extensions that are specified declaratively as attributes are executed.
3. All SOAP extensions that are members of group 1 are executed.

Incorrect answers:

A, B, C: You should not set the group number to 1 as it will result in decompression to occur after decryption.

QUESTION 27

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as a financial information services provider to a number of financial institutions, i.e. banks.

You are currently developing an application that will allow interaction with the financial institutions. All these banks expose a Web service that conforms to a standard Web Services Description Language (WSDL) document. However there are some of these banks that do not support a SOAP head that will allow

Certkiller .com to pass transaction information to the Web services.

To this end you make use of Microsoft Visual Studio 2005 to generate a Web proxy service named FinancialService. The exhibit below illustrates the class that also gets generated.

Exhibit:

```
public class Transaction : System.Web.Services.Protocols.SoapHeader
{
    public int TransactionID;
    public string TransactionState;
}
```

You then proceed to write the following code so as to initiate the proxy class:

```
01 Dim financialServiceProxy as FinancialService = New FinancialService[]
02 financialServiceProxy.TransactionValue = New Transaction []
03 financialService Proxy.TransactionValue.TransactionID = 1000
04 financialService Proxy.TransactionValue.MustUnderstand = True
```

However, after you have written this code you discover that the financial institutions that do support SOAP heads; throw exceptions of type SoapHeaderException when the Web methods are invoked. You thus need to modify the code to prevent these exceptions from being thrown.

What should you do? (Choose the line number that represents the code statement that should be modified.)

- A. 01
- B. 02
- C. 03
- D. 04

Answer: D

Explanation: Line 04 should be changed. More specifically the MustUnderstand property of the Transaction class should be changed to false. When set to true, the Web method is invoked must understand the header represented by that class. Else the Web method throws an exception of SoapHeaderException. Because not all the financial institutions support SOAP headers, you should not force the Web services to understand the header.

Incorrect answers:

A, B, C: None of these line statements will cause an exception of type SoapHeaderException to be thrown.

QUESTION 28

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The creation, configuration and deployment of Remoting applications form part of your responsibilities at Certkiller .com.

A class named ObjectManager is defined in the ManagementServer namespace in

an executable named ManagementServer.exe. The ObjectManager class is derived from MarshalByRefObject. You then create a client application named Client.exe. Client.exe does not have a reference to ManagerServer.exe. You need to keep in mind that there are a few technical requirements. These are:

1. The client application must execute with restricted permissions.
2. The ObjectManager must execute with unrestricted permissions.

You now need to create an instance of ObjectManager in the client application. What should you do? (Choose the correct code segment.)

A. Assembly remoteAssembly = Assembly.LoadFrom(@"ManagementServer.exe");
PolicyLevel level = PolicyLevel.CreateAppDomainLevel();
PermissionSet permissionSet = New PermissionSet(PemissionState.Unrestricted);
level.RootCodeGroup.PolicyStatement = New PolicyStatement(permissionSet);
AppDomain.CurrentDomain.SetAppDomainPolicy(level);
object instance =
remoteAssembly.CreateInstance("ManagementServer.ObjectManager");

B. PolicyLevel level = PolicyLevel.CreateAppDomainLevel();
PermissionSet permissionSet = new PermissionSet(PermissionState.Unrestricted);
level.RootCodeGroup.PolicyStatement = new PolicyStatement(permissionSet);
AppDomain.CurrentDomain.SetAppDomainPolicy(level);
ObjectHandle handle =
AppDomain.CurrentDomain.CreateInstanceFrom("ManagementServer.exe",
"ManagementServer.ObjectManager");

C. AppDomain remoteDomain = AppDomain.CreateDomain("RemoteComponents");
remoteDomain.ExeciteAssembly("ManagementServer.exe");
PolicyLevel = PolicyLevel.CreateAppDomainLevel();
PermissionSet permissionSet = new PermissionSet(PemissionState.Unrestricted);
level.RootCodeGroup.PolicyStatement = new PolicyStatement(permissionSet);
remoteDomain.SetAppDomainPolicy(level);
ObjectHandle handle = remoteDomain.CreateInstanceFrom("ManagementServer.exe",
"ManagementServer.ObjectManager");

D. PolicyLevel level = PolicyLevel.CreateAppdomainLevel();
PermissionSet permissionSet = new PermissionSet(PermissionState.Unrestricted);
level.RootCodeGroup.PolicyStatement = new PolicyStatement(permissionSet);
AppDomain.CurrentDomain.SetAppDomainPolicy(level);
ManagementServer.ObjectManager objectManager = New
ManagementServer.ObjectManager();

Answer: C

Explanation: ObjectManager should be created in a separate application domain because then it will allow unrestricted permissions to ObjectManager while still allowing the application to continue to run with restricted permissions. To create the application domain, you must call the CreateDomain method of the AppDomain class. ManagementServer.exe should then be loaded into the application domain by means of calling the ExecuteAssembly method of the AppDomain class. Then the security policy

for the application domain should be set. Then you should create an instance of ObjectManager from the application domain by calling the CreateInstanceFrom method of the AppDomain class.

Incorrect answers:

A: The LoadFrom method loads an assembly into the current application domain, but due to the client application having a different requirement from the ObjectManager, you should load the ObjectManager into a different application domain. This means that you should not call the LoadFrom method of the Assembly class.

B: The CreateInstanceFrom method of the current AppDomain instance should not be called. It will then load an instance of ObjectManager into the current application domain. But because the client application has different requirement to that of ObjectManager, you should rather load ObjectManager into a different application domain.

D: The client application does not have a reference to ManagementServer.exe and thus you should not instantiate ObjectManager by calling its constructor. If you do it will load an ObjectManager instance into an application domain based on whether its configured to make use of Microsoft.Net Remoting or not.

QUESTION 29

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of applications forms part of your responsibilities at Certkiller .com.

You are currently developing an application that monitors a network for changes.

The application itself consists of a Microsoft ASP.NET Web application and a Microsoft .NET Remoting server component. Both of these exist on the same server but run in different processes. Policies and rules for monitoring the network are stored in a Microsoft SQL Server 2005 database. The server component contains a class named Monitor. This class contains a method named GetChanges that returns a DataSet instance. Changes to the network are represented by DataSet. When initiated the Monitor class will retrieve all policies and rules from the database.

You need to code the host application for the remote component to register the Monitor class for .NET Remoting. However, you do not want the remote component to query the database each time the GetChanges method is called. This means that you should configure a certain code segment.

What should you do?

- A. TcpClientChannel channel = new TcpClientChannel[];
ChannelServices.RegisterChannel[channel,false];
Remoting configuration.RegisterWellKnownServiceType[typeof[Monitor],
"Monitor.rem",WellKnownObjectMode.SingleCall;
- B. IpcServerChannel channel = new IpcServerChannel["MonitorHost"];
ChannelServices.RegisterChannel[channel, false];
RemotingConfiguration.RegisterWellKnownServiceType[typeof[Monitor],
"Monitor.rem",WellKnownObjectMode.Singleton];
- C. IpcServerChannel channel = new IpcServerChannel["Monitor"];

```
ChannelServices.RegisterChannel[channel,false];
RemotingConfiguration.RegisterWellKnownServiceType[typeof[Monitor],
"Monitor.rem",WellKnownObjectMode.SingleCall;
D. TcpClientChannel channel = new TcpClientChannel[];
ChannelServices.RegisterChannel[channel, false];
RemotingConfiguration.RegisterWellKnownServiceType[typeof[Monitor],
"Monitor.rem",WellKnownObjectMode.Singleton];
```

Answer: B

Explanation

: The IPC channel allows an application to communicate with a remote object in a different application domain running the same process or in a different process on the same computer.

You should also use the Monitor class as a singleton object by calling the RegisterWellKnownServiceType method of the RemotingConfiguration class and specifying WellKnownObjectMode.Singleton. Singleton objects has a lifespan that is determined by the .NET Remoting Lease Manager. When initiated, a Singleton object releases its memory until its lease expires. Thus the constructor will not be called with every remote method invocation. This is because the Monitor class queries the database in the constructor and the Singleton method ensures that the class does not query the database with every call to GetChanges.

Incorrect answers:

A: Though you can, you should not register a TcpClientChannel instance. IPC is preferred when using the same computer for intercommunication. If using TCP, you must register a TcpServerChannel instance. And then you would need to register a TcpClientChannel instance in the client application.

C: The Monitor class should not be registered as a single-call object. These objects have a lifetime of a single method call and thus their constructors are called with every method that is invoked, which in turn would cause each invocation to GetChanges to query the database.

D: IPC is preferred over TCP in this case and you should rather be making use of the singleton object.

QUESTION 30

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are currently developing a Microsoft.NET Remoting component that will be accessed over the Certkiller .com local area network (LAN). To this end you create a console application named RemoteHost.exe to serve remote calls to the component. You added Remoting configuration settings in the app.config file of the console application's project. Now you need to configure the host application to use those configuration settings that has been added in the app.config file.

What should you do? (Choose the appropriate code segment.)

- A. `RemotingConfiguration.Configure["@bin\Release\app.config",false];`
- B. `RemotingConfiguration.Configure["app.config",false];`
- C. `RemotingConfiguration.Configure["@bin\Debug\RemoteHost.exe.config", false];`
- D. `RemotingConfiguration.Configure["RemoteHost.exe.config",false];`

Answer: D

Explanation: When passing the "RemoteHost.exe.config" to the configure method of the RemotingConfiguration class, then the app.config file is copied to the runtime directory and renamed to the executable file with ".config" affixed after you compile a console application.

Incorrect answers:

- A: You should not pass "bin\Release\app.config" to the Configure method because this is a project file and not a runtime file.
- B: You should not pass "app.config" to the Configure method because this is a project file and not a runtime file.
- C: You should not pass "bin\Debug\RemoteHost.exe.config" to the configure method because the RemoteHost.exe.config file exists in the same folder as RemoteHost.exe. This means that you should only be passing the configuration file to the method.

QUESTION 31

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are currently developing a Microsoft.NET Remoting component that will allow all Certkiller .com employees to send messages and receive messages to each other. To this end you implement the message functionality in an assembly named Messenger.dll. Messenger.dll contains the remotable types. You further implement a host application to host the remotable types and a client application that will provide the user interface.

The Messenger.dll assembly must be private to the application and thus you use both client and server configuration files to configure .NET Remoting. Keep in mind that you are not using any custom .NET Remoting extensions, i.e. custom formatters or custom channels. You thus need to configure the application so that you can use strongly-typed instances of the remotable types in the client application.

What should you do?

- A. You should install the Messenger.dll assembly as a private component into the COM+ catalog.
- B. You should install the Messenger.dll assembly into the global assembly cache (GAC).
- C. You should add a reference to the Messenger.dll assembly in the client application.
- D. You should add a reference to the Messenger.dll assembly in the remote host application.

Answer: C

Explanation: This option will allow you to access the types in a strongly-typed manner. Even when instances of these types will be proxy instances at run time, the instances will be marshaled between the client and remote host applications.

Incorrect answers:

A: This option will allow the other COM+ components in the same COM+ application to access the component. Furthermore it will also require the types defined in the Messenger.dll assembly to be hosted by the COM+ hosting process, and in this case the types are hosted by a custom remote host application.

B: The assembly should not be installed in the GAC because the GAC allows for the sharing of assemblies. One requirement is to have the Messenger.dll assembly private to the application.

D: The reference to the Messenger.dll assembly should not be added in the remote host assembly. This will make allowance for using strongly typed instances within the remote host application and not the client application.

QUESTION 32

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are currently developing an application that monitors a network for changes.

This application consists of a Microsoft Windows Forms client and a Microsoft .NET Remoting server component. An assembly named ScanEngine.dll hosts the server component. The following exhibit illustrates that server configuration:

```
<configuration>
<system.runtime.remoting>
<application name="Monitor.rem">
<service>
<activated type="ScanEngine.Monitor, ScanEngine" />
<service>
<channels>
<channel ref="tcp" port="9001" />
</channels>
</application>
</system.runtime.remoting>
</configuration>
```

The following exhibit illustrates the client configuration.

```
<configuration>
<system.runtime.remoting>
<application>
<client url="tcp://appserver:9001/Monitor.rem">
<activated type="ScanEngine.Monitor, ScanEngine" />
```

```
<client>
<channels>
<channel ref="tcp">
</channel>
</channels>
<application>
<system.runtime.remoting>
</system.runtime.remoting>
</application>
</channels>
</client>
```

Following is the procedure that you followed:

1. Add a reference to the ScanEngine assembly to the client application.
2. Register the .NET Remoting configurations by using the RemotingConfiguration class.

You now need to create an instance of the Monitor class that will enable you to call its methods remotely.

What should you do?

A. Use the following code segment:

```
Monitor monitor = new Monitor();
```

B. Use the following code segment:

```
Monitor monitor = (Monitor)Activator.GetObject(typeof(Monitor),
"tcp://appserver:9001/Monitor.rem");
```

C. Use the following code segment:

```
Monitor monitor =
(Monitor)AppDomain.CurrentDomain.CreateObjRef(typeof(Monitor));
```

D. Use the following code segment:

```
Monitor monitor = (Monitor)
AppDomain.CurrentDomain.CreateInstance("ScanEngine", "ScanEngine.Monitor");
```

Answer: A

Explanation: When one registers the client configuration using the RemotingConfiguration class, then the common language runtime (CLR) knows that a proxy should be created for the construction of any types that are specified in the configuration. Because the Monitor class is specified in the client configuration, the CLR creates a proxy that is identical to the Monitor class. The .NET Remoting infrastructure then initiates the Monitor class on the servers and passes either an object reference or a serialized copy of the Monitor instance back to the client. Thus you should simply use the new operator to instantiate the Monitor class.

Incorrect answers:

B: Calling the GetObject method of the Activator class will result in the retrieval of object references for server-activated objects and not client-activated objects.

C: Calling the CreateObjRef method of the AppDomain class to create instances of remote objects is possible, but you cannot cast the type of the value returned from the method to Monitor. In this case the type of value returned from CreateObjRef is ObjRef. You must call the GetRealObject method of ObjRef to get an instance of the real object.

D: Calling the CreateInstance method of the AppDomain class to create instances of remote objects is possible, but you cannot cast the type of value returned from the method to

monitor. In this case the value returned from CreateInstance is ObjectHandle. You should rather call the Unwrap method of ObjectHandle to get an instance of the real object.

QUESTION 33

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

Another developer named Clive Wilson developed a Microsoft .NET Remoting component. You need to access this component from a Microsoft Windows Forms client application named Client.exe. You thus add the configuration settings provided to you by Clive Wilson to the app.config file of the client application's project. Now you need to configure the client application to use the configuration settings in app.config.

What should you do?

A. Use the following code segment:

```
RemotingConfiguration.Configure(@"obj\Debug\app.config", false);
```

B. Use the following code segment:

```
RemotingConfiguration.Configure(@"bin\Debug\Client.exe.config", false);
```

C. Use the following code segment:

```
RemotingConfiguration.Configure("app.config", false);
```

D. Use the following code segment:

```
RemotingConfiguration.Configure("Client.exe.config", false);
```

Answer: D

Explanation: After you compile a Windows Forms application, the app.config file is copied to the runtime directory and renamed to the executable file with .config affixed. Thus you pass "Client.exe.config" to the Configure method of the RemotingConfiguration class.

Incorrect answers:

A: You should not pass "obj\Debug\app.config" to the Configure method as the app.config file is a project file and not a runtime file.

B: Passing "bin\Debug\Client.exe.config" to the Configure method should not be done because the Client.exe.config file exists in the same folder as Client.exe which means that you should rather pass the configuration file name only to the method.

C: Passing the app.config" to the Configure method is incorrect because this is a project file and not a runtime file.

QUESTION 34

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You have just completed developing and deploying a Microsoft.NET Remoting component to a server computer. Microsoft Internet Information Services (IIS) 6.0 is hosting the component. The component runs in an application pool that is configured with the default identity. You received instruction to debug the remote component. You want to do so from your development computer. What should you do?

- A. Ensure that you have administrative privileges on the server computer. Then attach the debugger to the generic service host process [scvhost.exe] on the server computer.
- B. Ensure that you have membership of only the Debugger Users group on the server computer. Then attach the debugger to the ASP.NET Worker Process [w3wp.exe] on the server computer.
- C. Ensure that you have administrative privileges on the server computer. Then attach the debugger to the ASP.NET Worker Process [w3wp.exe] on the server computer.
- D. Ensure that you have administrative privileges on the server computer. Then attach the debugger to the COM+ hosting process [dllhost.exe] on the server computer.

Answer: C

Explanation: You will need administrative privileges on the server computer since only users with administrative privileges can debug remote processes when the process runs under the Network Service account. Since the remote component is hosted by IIS, it means that it is hosted by the w3wp.exe process. And this process runs each application pool under the Network Service Account by default.

The w3wp.exe process is the ASP.NET process used to host ASP.NET Web applications, -Web services and .NET Remoting components that are hosted by IIS. Thus the debugger should be attached to the ASP.NET Worker Process [w3wp.exe] on the server computer.

Incorrect answers:

- A: The svchost.exe process is used to host Microsoft Windows services that are implemented in DLLs. This should not be attached to the debugger.
- B: Members of the debugger Users group on the server computer with non-administrative privileges can debug remote processes only if the processes do not run under the Network Service account. This is not the case in this question.
- D: You should not attach the debugger to the dllhost.exe process as this process is used to host COM+ server applications.

QUESTION 35

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You have just completed developing a Microsoft.NET Remoting component that will be used by applications within Certkiller .com. Microsoft Internet Information Services (IIS) 6.0 will be hosting the component. You need to specify a channel and formatter to use so that successful communication can take place between the applications and the remote component. What should you do?

- A. Make use of a Transmission Control Protocol (TCP) channel with a SOAP formatter.
- B. Make use of a Hypertext Transfer Protocol (HTTP) channel with a SOAP formatter.
- C. Make use of an Inter-process Communication (IPC) channel with a binary formatter.
- D. Make use of a Transmission Control Protocol (TCP) channel with a binary formatter.

Answer: B

Explanation: Because IIS is supported by the HTTP channel you should make use of an HTTP channel with a SOAP formatter.

Incorrect answers:

A: Making use of a TCP channel with a SOAP formatter will not work since only a HTTP channel can support IIS.

C: Making use of an IPC channel with a binary formatter will not work since only a HTTP channel can support IIS.

D: Making use of a TCP channel with a binary formatter will not work since only a HTTP channel can support IIS.

QUESTION 36

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

Another Certkiller .com developer named Rory Allen developed a Microsoft .NET Remoting component. This .NET Remoting component is hosted in Microsoft Internet Information Services (IIS) over port 80. The types in the component are configured to use binary serialization and deserialization. You need to programmatically register an HTTP channel in a client application that accesses the remote types.

What should you do?

A. Use the following code segment:

```
BinaryClientFormatterSinkProvider provider = new  
BinaryClientFormatterSinkProvider();  
HttpClientChannel channel = new HttpClientChannel("http", provider);
```

B. Use the following code segment:

```
BinaryServerFormatterSinkProvider provider = new  
BinaryServerFormatterSinkProvider();
```

```
HttpServerChannel channel = new HttpServerChannel("http", 80, provider);
```

C. Use the following code segment:

```
BinaryServerFormatterSinkProvider provider = new
```

```
BinaryServerFormatterSinkProvider();
```

```
HttpServerChannel channel = new HttpServerChannel("http", 80, provider);
```

D. Use the following code segment:

```
BinaryClientFormatterSinkProvider provider = new
```

```
BinaryClientFormatterSinkProvider();
```

```
IDictionary properties = new Hashtable();
```

```
properties.Add("provider", provider);
```

```
HttpClientChannel channel = new HttpClientChannel();
```

Answer: A

Explanation

: A sink is akin to a point in a communication chain where something specific happens. I.e. it formats a message at a specific point in a communication chain. A sink provider is responsible for creating the sink. You should then create an instance of `HttpClientChannel` and pass the `BinaryClientFormatterSinkProvider` instance as a parameter. This creates an HTTP client channel that uses a binary formatter to serialize messages.

Incorrect answers:

B: You should not create an instance of `HttpServerChannel` as it will result in an HTTP server channel to be created. In this particular case you need to create an HTTP client channel.

C: You need to specify the `BinaryClientFormatterSinkProvider` instance as a parameter to the `HttpCliewntChannel` constructor otherwise the HTTP client channel will make use of the default formatter which is a SOAP formatter.

D: Creating an instance of `BinaryServerFormatterSinkProvider` is incorrect. This class represents a sink provider that uses a binary formatter to deserialize messages to the remote server that are sent from a client application. In this case you must create a binary formatter that the client application can use.

QUESTION 37

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are currently developing a Microsoft.NET Remoting component that will be used to accept connections over a binary inter-process communication (IPC) channel. You make use of a configuration file to configure the remote host application for .NET Remoting. The component works as expected when you test the component from a client application after you have done the configuration.

You then implement an event to notify client implications about any changes to the state of the component. The delegate that declares the event specifies an

EventArgs-derived class named StateChangeEventArgs as its second parameter. This now results in a SecurityException instance being invoked when a client application attempts to attach a delegate to the event. This SecurityException instance is thrown with the following message:

Type System.DelegateSerializationHolder and the types derived from it (such as SystemDelegateSerializationHolder) are not permitted to be serialized at this security level.

You need to prevent this exception from being thrown.

What should you do?

A. Code access security to demand full trust permissions immediately before the configuration of the remote host application to accept remote connections should be used.

B. <serverProviders>

<Formatter ref="binary" typeFilterLevel="Full"/>

</serverProviders>

should be added to the channel element in the server configuration file.

C. The remote component should be hosted in Internet Information Services (IIS) 6.0 without changing the channel or the formatter.

Then configure a virtual directory to make use of integrated Windows authentication only.

D. The StateChangeEventArgs class should be derived from MarshalByRefObject.

Then apply the Serializable attribute to the StateChangeEventArgs class.

Answer: B

Explanation: you need to configure the binary formatter for full serialization. .NET Remoting makes use of low serialization by default. This results in the fact that only basic common language runtime (CLR) types are deserialized. For the full deserialization of delegates you should configure the binary formatter by setting the typeFilterLevel attribute of the formatter element to Full.

Incorrect answers:

A: The remote host application should not be configured to demand full trust permissions as it will not allow the remote component to deserialize delegates.

C: The IIS should not host the remote component. IIS only supports HTTP channels and in this case you are using IPC.

D: The StateChangeEventArgs class should not be derived from MarshalByRefObject. Instances of marshal-by-reference types are not transmitted across application domains.

QUESTION 38

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of client applications forms part of your responsibilities at Certkiller .com. You are currently developing a client application that will use Microsoft.NET Remoting to access functionality implemented by a remote component. This remote component is exposed through the HyperText Transfer

Protocol (HTTP) channel. Furthermore the remote component will make use of the default formatter to serialize and deserialize data.

You now need to configure the client application in such a way so as to enable it to serialize data in a form that is expected by the remote component. You may not use custom channels and formatters.

What should you do? (Choose the correct configuration.)

- A. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="soap">
<clientProviders>
<formatter ref="http"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
- B. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="http">
<clientProviders>
<formatter ref="binary"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
- C. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="http">
<clientProviders>
<formatter ref="soap"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>

```
D. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="binary">
<clientProviders>
<formatter ref="http"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
```

Answer: C

Explanation

: The channel element's ref attribute should be set to http, and the formatter element's ref attribute to soap, because the channel element specifies the channel through which the application will communicate with the remote component. The only available channels are HTTP, IPC and TCP. The formatter element specifies the serialization formatter responsible for the serialization and deserialization of data that passes through the channel. The only available formatters are SOAP and Binary. The HTTP channel used the SOAP formatter whereas the TCP and IPC channels use the binary formatter by default.

Incorrect answers:

A: The channel element ref cannot be set to SOAP because SOAP is not a channel. If you do this then you will need to implement a custom HTTP channel and specify Soap as its name. However, it is stated in the question that you may not make use of custom channels or custom formatters.

B: You should not set the formatter ref attribute to binary because the default formatter for HTTP channel is SOAP and in this case the remote component makes use of the default formatter for HTTP.

D: The channel element ref cannot be set to binary since binary is not a channel. If you do this then you will need to implement a custom HTTP channel and you may not make use of a custom channel or formatter. Furthermore, HTTP is not a formatter and if you do this then again it will require a custom SOAP formatter.

QUESTION 39

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

You are currently developing a Microsoft .NET Remoting component. A class named TransactionManager is configured to be accessed as a Singleton object

through Microsoft .NET Remoting. This class does not control its own lifetime since it derives from MarshalByRefObject. You create an instance of this class named transactionManager in a client application. Now you need to renew the lease of transactionManager for 20 minutes when it expires.

What should you do?

A. Use the following code segment:

```
ILease lease = (ILease) AppDomain.CurrentDomain.InitializeLifetimeService();  
lease.RenewOnCallTime = TimeSpan.FromMinutes(20);
```

B. Use the following code segment:

```
ILease lease = (ILease) transactionManager.InitializeLifetimeService();  
lease.RenewOnCallTime = TimeSpan.FromMinutes(20);
```

C. Use the following code segment:

```
ILease lease = (ILease) AppDomain.CurrentDomain.GetLifetimeService();  
lease.Renew(TimeSpan.FromMinutes(20));
```

D. Use the following code segment:

```
ILease lease = (ILease) transactionManager.GetLifetimeService();  
lease.Renew(TimeSpan.FromMinutes(20));
```

Answer: D

Explanation: The GetLifeTimeService method is defined in the MarshalByRefObject class. This method returns an object that controls the lifetime for a marshal-by-reference object. By default this is an instance of ILease. In this case the marshal-by-reference object is transactionManager. You should call the Renew method of ILease to renew the lease of transactionManager for 20 minutes. This means calling the GetLifeTimeService method of transactionManager.

Incorrect answers:

A: You should not set the RenewOnCallTime property because it will only result in a lease of transactionManager to extend for 20 minutes only when a method of transactionManager is called. It will not renew the lease if it has already expired.

B: The RenewOnCallTime property represents the lease renewal time when a method on a remote object is invoked. This means that you should not set the RenewOnCallTime property in this case since it will then only result in a lease of transactionManager to extend for 20 minutes only when a method of transactionManager is called. It will not renew the lease if it has already expired.

C: You should not call the GetLifeTimeService method of the current AppDomain instance. This will return an object that controls the lifetime for the AppDomain instance and the AppDomain instance also derives from MarshalByRefObject.

QUESTION 40

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently developing a Microsoft Windows Forms application. This application will access an Extensible Markup Language (XML) Web service. The application calls a web method named ProduceRecord asynchronously to render a medical record of a specific patient. The application must perform additional processing while the medical record is being rendered. Once rendering has been completed, you need to display the medical record by using the same thread that you use to perform the additional processing. You need to ensure that you implement the functionality to meet this requirement. What should you do?

- A. Polling should be implemented.
- B. A semaphore should be implemented.
- C. A callback should be implemented.
- D. Blocking should be implemented.

Answer: A

Explanation: Polling will allow the application itself to perform additional processing until the asynchronous operation completes.

Incorrect answers:

B: A Semaphore will allow you to implement access control to a shared resource and in this case you are not limiting access control.

C: Callbacks are used when an application must allow user interaction while an asynchronous operation is taking place. Thus you would obtain the results of the method invocation on a thread separate from the one you use to perform additional processing. This is in violation of the requirements.

D: Blocking will halt the current thread until an asynchronous operation completes. This will then prevent the application from performing additional processing while the asynchronous operation is taking place.

QUESTION 41

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently developing a client application. This application will access an Extensible Markup Language (XML) Web service. The application contains a web method named GetReport that executes queries and returns an instance of a class named Report. Following is a description of the procedure that you followed:

1. You generate a proxy for the Web service using Microsoft Visual Studio 2005.
2. You call the GetReport Web method asynchronously.
3. You configure the proxy to raise an event when the asynchronous operation completes.
4. You create an event handler named OnReportReceived that accepts a parameter named sender of type Object and a parameter named args of type

GetReportCompletedEventArgs.

5. You associate the event handler with the event.

You now need to access the returned Report instance in the event handler when the asynchronous operation completes.

What should you do?

- A. The GetReportCompletedEventArgs instance should be cast to an instance of Report.
- B. The Result property of the GetReportCompletedEventArgs instance must be accessed.
- C. The UserState property of the GetReportCompletedEventArgs instance must be accessed.
- D. The sender parameter on the OnReportReceived event handler should be cast to an instance of Report.

Answer: B

Explanation: Visual Studio 2005 Web service proxy generator automatically creates asynchronous methods for any Web methods exposed by a Web service. "Async" is then appended to the name of each Web method to create an associated asynchronous method. Additionally, Visual Studio creates a delegate and an event to support the asynchronous method. The name of the event is the name of the Web method appended with "Completed." This event is raised when the asynchronous method completes. The generator also creates a class that derives from EventArgs to support the delegate. The name of the class is the name of the event appended with "EventArgs." For asynchronous Web methods to return only a single value, the EventArgs-derived class contains a property named Result whose type is the same as the return value of the event. This then allows you to use strong-typing to access the results of the asynchronous operation. In this particular case because the GetReport Web method returns a Report instance, the value returned from the Result property of the GetReportCompletedEventArgs class is also a Report instance.

Incorrect answers:

A: The GetReportCompletedEventArgs instance should not be cast to an instance of Report. This property contains information regarding the state of the asynchronous operation. You must access its result property to get the return value from the Web method.

C: There is no need to access the UserState property of the GetReportCompletedEventArgs instance. This property will return a user-defined object that represents the state of the asynchronous operation. You cannot use it to access a return value.

D: The sender parameter of the OnReportReceived event handler should not be cast. This parameter identifies the object that raised the event and in this case the object is an instance of the proxy class.

QUESTION 42

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The implementation of asynchronous calls and remoting events form part of your

responsibilities at Certkiller .com. You have created a Microsoft.NET Remoting component that will import data into a database. The Microsoft.NET Remoting component seems to work but you had complaints regarding sluggish client-side performance. To this end you need to apply the OneWay attribute to methods in the component so as to improve the client-side performance. What should you do?

- A. Apply the OneWay attribute to methods that do not have only output parameters.
- B. Apply the OneWay attribute to methods that do not have input parameters.
- C. Apply the OneWay attribute to methods that do not have return values.
- D. Apply the OneWay attribute to methods that are not overloaded.

Answer: C

Explanation

: Remote methods marked with the OneWay attribute does not send responses back to the client and as such cannot have return values, reference parameters, or output parameters. Thus to improve client-side performance you should apply the OneWay attribute to the methods that has no return values.

Incorrect answers:

A: Remote methods that are marked with the OneWay attribute cannot have return values, reference- or output parameters. Thus you should not apply the attribute to methods that has only output parameters.

B: Since Remote methods marked with the OneWay attribute do not send responses back to clients, you should not apply the attribute to methods that do not have input parameters.

D: You should not apply the attribute to methods that are not overloaded. There are no additional restrictions on overloaded methods, but because Remote methods marked with the OneWay attribute do not send responses back to the client, they cannot have return values, reference- or output parameters.

QUESTION 43

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You have just completed the development of a Microsoft.NET Remoting component. You now need to call a remote method asynchronously and obtain an IAsyncResult instance as a result. You thus need to perform additional processing while the asynchronous operation is taking place.

What should you do?

- A. You should create a loop and poll on the IAsyncResult.IsCompleted property.
- B. You should create a loop and poll on the IAsyncResult.CompleteSynchronously property.

- C. You should call the WaitAny method of the WaitHandle class, passing to it a WaitHandle array that contains the IAsyncResult.AsyncWaitHandle object.
- D. You should call the WaitAll method of the WaitHandle class, passing to it a WaitHandle array that contains the IAsyncResult.AsyncWaitHandle object.

Answer: A

Explanation: A loop and poll on the IAsyncResult.IsCompleted property will indicate whether the asynchronous operation has completed. This will allow you to perform additional processing during the asynchronous operation.

Incorrect answers:

- B: The .CompleteSynchronous property will determine whether an asynchronous operation was actually completed synchronously. If you poll this property, you will be creating an infinite loop for operations that do not complete synchronously.
- C: You should not call the WaitAny method of the WaitHandle class because it will block the current thread until at least one asynchronous operation reaches completion. Blocking should not be implemented in this case because you need to perform additional processing while the asynchronous operation is taking place.
- D: You should not call the WaitAll method of the WaitHandle class because it blocks the current thread until all asynchronous operations are completed.

QUESTION 44

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently busy creating a client application that calls a remote method. This remote method is defined in a Microsoft .NET Remoting component. Your application makes use of common language runtime (CLR) managed types only. You want the remote methods to be called asynchronously and thus need to configure the client application appropriately. What should you do?

- A. A delegate that matches the signature of the remote method should be created.
- B. A thread pool that allows a maximum of one thread should be created.
- C. The OneWay attribute should be applied to the client-side method that calls the remote method.
- D. The STAThread attribute should be applied to the client-side class that calls the remote method.

Answer: A

Explanation: Instances of delegates contain BeginInvoke and EndInvoke methods that can be used to invoke methods asynchronously. The BeginInvoke method starts a separate thread to invoke the method associated with the delegate. The EndInvoke

method ends the asynchronous operation so that you can access any return values, reference parameters, etc. Thus you should create a delegate that matches the signature of the remote method.

Incorrect answers:

B: To allow a method to execute asynchronously, multiple threads must execute simultaneously and by default, thread pools have a maximum of 25 threads per processor. Thus you should not create a thread pool that allows a manimum of one thread.

C: The OneWay attribute should not be applied to the client-side method that calls the remote method. OneWay attributes should be applied to remote methods that do not senf responses back to the client.

D: The STAThread attribute should not be applied to the client-side class that calls the remote method. This attribute only applies to applications that interoperate with COM. COM types are unmanaged types. It is mentioned in the question that the application makes use of managed types only.

QUESTION 45

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You are busy developing a Microsoft Windows Form application that will access a Microsoft.NET Remoting component. In the event of a user clicking the Print button on a form, the application must call a remote method asynchronously to print a batch of invoices. The application you are developing must allow users the ability to perform other tasks while the invoices are being printed. Once all of the invoices have been printed, the application must interrupt the user by displaying a message box, notifying the user of the status of the invoice printing.

You thus need to implement the functionality to meet all these requirements.

What should you do?

- A. A callback should be implemented.
- B. A semaphore should be implemented.
- C. Blocking should be implemented.
- D. Polling should be implemented.

Answer: A

Explanation: A callback will allow you to configure a method that can be executed on another thread when the asynchronous operation completes. This will prevent you from having to block the current thread until the asynchronous operation completes, thus allowing the users to ability to perform other tasks with the application.

Incorrect answers:

B: A semaphore will allow you to implement access control to a shared resource and in this case there is no mention of limiting and exercising any access control.

C: Blocking will halt the current thread until an asynchronous operation is completed and

would thus prevent users from performing other tasks while the asynchronous operation is taking place.

D: Polling is used when the application itself must perform additional processing until an asynchronous operation is completed. But in this case the users will be performing the additional tasks and not the application itself.

QUESTION 46

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You created a callback method that mathes the AsyncCallback delegate. This callback method is invoked whenever a particular long-running asynchronous operation completes. This asynchronous operation happens as a result of a method in a Microsoft .NET Remoting component that is invoked. You need to implement the callback method to retrieve the return value from the remote method.

What should you do? (Each correct answer presents part of the solution. Choose THREE.)

- A. Cast the IAsyncResult parameter to the callback method to an instance of AsyncResult.
- B. Cast the IAsyncResult parameter to the type of the return value.
- C. Cast the AsyncDelegate property of the AsyncResult instance to the delegate that was used to begin the asynchronous operation.
- D. Cast the AsyncState property of the IAsyncResult parameter to the type of the return value.
- E. Call the EndInvoke method of the delegate instance.

Answer: A, C, E

Explanation: You need to call the EndInvoke method of the fdelegate instance that began the asynchronous operation. To obtain this delegate instance, you must first cast the IAsyncResult parameter to the callback method to an instance of AsyncResult. The AsyncResult class contains an AsyncDelegate property that represents the delegate instance that was used to begin the asynchronous operation. However, since the type of this property is Object, you need to cast the property to the delegate that was used to begin the asynchronous operation.

Incorrect answers:

B: You should not cast the IAsyncResult parameter to the type of the return value because an IAsyncResult instance contains information about the state of an asynchronous operation.

D: You should not cast the AsyncState property of the IAsyncResult parameter to the type of the return value because this property holds the user-defined data, but it does not store an asynchronous operation's results.

QUESTION 47

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are busy developing a Microsoft.NET Remoting component that will allow messages to be sent between client applications. To this end you are creating an event named MessageReceived. Message Received is configured to accept two parameters:

1. An Object instance that represents the object that raised the event.
2. A MessageReceivedEventArgs instance that will contain the data about the message that was sent.

You need to enable the client applications to receive details about a message that was sent. You thus need to code the MessageReceivedEventArgs class accordingly. What should you do?

- A. The MessageReceivedEventArgs class must be derived from the ServicedComponent.
- B. The MessageReceivedEventArgs class must be derived from the MarshalByRefObject.
- C. You should apply the Serializable attribute to the MessageReceivedEventArgs class.
- D. You should apply the NonSerializable attribute to each of the MessageReceivedEventArgs class members.

Answer: C

Explanation: When you apply the Serializable attribute to the MessageReceivedEventArgs class, it will configure the marshal-by-value type. This type can be created on a remote server, serialized, and then transported across the remote boundaries to a remote client.

Incorrect answers:

A: The MessageReceivedEventArgs class should not be derived from the ServicedComponent as ServicedComponent derives from MarshalByRefObject and as such are executed at the server only.

B: The MessageReceivedEventArgs class should not be derived from the MarshalByRefObject as this will configure the class as a marshal by reference type. And these types are executed at the server only.

D: The NonSerializable attribute should not be applied to each member of the MessageReceivedEventArgs class as this will prevent the message details from being serialized.

QUESTION 48

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently implementing a Microsoft .NET Remoting component that raises an event to send notifications to remote client applications. To this end you create an event sink class to marshal event invocations. You need to allow the client applications to receive notifications when the event gets raised. Each client must be able to handle the event differently.

What should you do?

- A. A single event must be created in the client application.
- B. A single event must be created in the remote component.
- C. Two events must be created: one in the remote component and another in the event sink class.
- D. Two events must be created: one in the remote component and another in the client application.

Answer: C

Explanation:

The event sink class should handle the remote component's event by raising its own event. The client application will then be able to attach a delegate instance to the event sink class' event, which in turn will allow each client application to handle the remote event differently. An event sink class' purpose is to marshal event invocations between application domains. Thus the solution should be create an event in the remote component and create another event in the event sink class.

Incorrect answers:

A: Creating a single event in the client application is incorrect since the remote component is unable to raise events in the client application directly. It can only do so through event sink classes.

B: Creating a single event in the remote component is not the solution. If you do this, then you must implement the event handler functionality in the event sink class. Even then it will not allow each client application to handle the remote event differently.

D: The remote compomnent cannot raise events in the client application directly. It can only do so through event sink classes. Thus creating one event in the remote component and the other event in the client application would be incorrect.

QUESTION 49

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You are busy developing a client application that will access a Microsoft.NET Remoting messenger application. The messenger application will allow messages to be sent between client applications. A remote class named RemoteMessenger exposes a remote event named MessageReceived. This event will be raised in the event of a client application calling the SendMessage method of the RemoteMessenger class.

A client event sink class named MessengerEventSink handles the remote

MessageReceived event in an event handler named OnMessageReceived. In the OnMessage Received handler, the MessengerEventSink class raises its own MessageReceived event.

You are required to allow the client application to be notified as well as log messages when messages are sent through the messenger application. You should take care to not modify the RemoteMessenger class or the MessengerEventSink class.

What should you do?

- A. A delegate instance that represents the OnMessageReceived event handler to the MessageReceived event of the RemoteMessenger class should be attached.
- B. A delegate instance that represents the OnMessageReceived event handler to the MessageReceived event of the MessengerEventSink class should be attached.
- C. A delegate instance that represents a method in the client application to the MessageReceived event of the MessengerEventSink class should be attached.
- D. A delegate instance that represents a method in the client application to the MessageReceived event of the RemoteMessenger class should be attached.

Answer: C

Explanation

: The delegate instance that is attached to an event that gets raised in a remote class must also be called remotely. However, the direction of the remote call to raise events is from the remote server to the remote client. For this to happen, both the remote server and the remote client must know about the class that contains the method. This can be done by creating client event sink classes. In this case the client event sink class is the MessengerEventSink class. The only purpose of a client event sink class is to allow it to be marshaled from the server to the client to result in the event getting raised at the client. Due to the client event sink class handling the remote event by raising its own MessageReceived event you should handle the client event sink's MessageReceived event. This will allow you to log messages when the event is raised. And by not coupling the MessengerEventSink class' event handler to a specific implementation you will allow client applications to handle the remote event through client-specific implementations.

Incorrect answers:

A: When you attach a delegate instance that represents the OnMessageReceived event handler to the MessageReceived event of the RemoteMessenger class then the event handler will be coupled to a specific implementation and in addition you would then need to modify the MessengerEventSink class which will result in you not complying with the requirements.

B: When you attach a delegate instance that represents the OnMessageReceived event handler to the MessageReceived event of the MessengerEventSink class then the event handler will be coupled to a specific implementation and then it would also require you to modify the MessengerEventSink class which will result in you not complying with the requirements.

D: When you attach a delegate instance that represents a method in the client application to the MessageReceived event of the RemoteMessenger class the event that gets raised at

the server and its invocation is not automatically marshaled to the client application. It is client event sink classes that allow you to marshal event invocations from a remote server to a remote client.

QUESTION 50

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently implementing a Microsoft .NET Remoting component. This component raises events to send notifications to a remote client application. You need to allow the client applications to attach delegates to the events so that the events will get handled in the remote client application.

What should you do?

- A. The event handler should be implemented in a marshal-by-value class that exists in the remote client application.
- B. The event handler should be implemented in a marshal-by-value class that exists in an assembly common to both the remote client and the remote server.
- C. The event handler should be implemented in a marshal-by-reference class that exists in the remote client application.
- D. The event handler should be implemented in a marshal-by-reference class that exists in an assembly common to both the remote client and the remote server.

Answer: D

Explanation: The event handler should be implemented in a marshal-by-reference class that exists in an assembly common to both the remote client and the remote server. The delegate instance that is attached to an event that gets raised on a remote class must also be called remotely. However, the direction of the remote call to raise events is from the remote server to the remote client. Thus both the remote server and the client must know about the class that contains the method. This can be done via an event sink class.

Therefore you must place the event handler and any associated code in an assembly that can be referenced by both the client application and the server component.

Incorrect answers:

A: Methods that are implemented in the marshal-by-value classes are executed locally. Therefore implementing the event handler in a marshal-by-value class that exists in the remote client application will not work.

B: This option of implementing the event handler in a marshal-by-value class that exists in an assembly common to both the remote client and the remote server is incorrect.

When the server raises an event, an instance of the marshal-by-value class would be local to the server which means that the method will be called on the server and the question states pertinently that the event must get raised at the client.

C: You should not implement the event handler in a marshal-by-reference class that exists in the remote client application. To allow the server to raise the event the client

implies that the server must know about the event sink class. Therefore the class must be common to both the remote client and the remote server.

QUESTION 51

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently generating a proxy making use of Microsoft Visual Studio 2005 for a Web Services Enhancements (WSE) 3.0-enabled Extensible Markup Language (XML) Web Service in a client application. Unfortunately you did not have the WSE framework installed on your computer at that stage. You thus need to add the custom code to the proxy. At present your application references the following assemblies:

1. System
2. System Configuration
3. System Data System Deployment
4. System Drawing
5. System Web Services
6. System Windows Forms
7. SystemXml

At this stage you install the WSE 3.0 framework on your computer, and in addition you also added the reference to the required WSE 3.0 assemblies to your application. Now you need to make changes to your project to enable you to dynamically apply WSE 3.0 policies to all outgoing SOAP requests. You must ensure that you do not remove any of the custom code that has already been written. What should you do?

- A. Regenerate the proxy using Visual Studio 2005.
- B. Add a reference to the System.EnterpriseServices assembly.
- C. Modify the proxy class to derive from WebServicesClientProtocol.
- D. Remove the reference to the System.Web.Services assembly.

Answer: C

Explanation: If you modify the proxy class to derive from WebServicesClientProtocol, then all SOAP requests can adhere to the policies without removing any of the custom code that is already written. This class derived from SoapHttpClientProtocol, which is used to send SOAP messages to a Web service. However, this class also includes a method named SetPolicy which allows for the dynamic application of WSE 3.0 policy to a Web service proxy. Once you apply a policy to a proxy, all subsequent SOAP requests will adhere to that policy.

Incorrect answers:

- A: A regeneration of the proxy using Visual Studio 2005 will overwrite the custom code that is written in the proxy.
- B: A reference added to the System.EnterpriseServices assembly will not work. This

assembly contains types that are used with COM+ and does not provide you with the ability to apply WSE 3.0 policies.

D: A reference removed from the System.Web.Services assembly is not the solution. the WebServicesClientProtocol class derives from SoapHttpClientProtocol, which is defined in the System.Web.Services assembly.

QUESTION 52

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently implementing two SOAP extension classes named EncryptionExtension and CompressionExtension respectively. These two classes encrypt and compress outgoing SOAP messages, and exist in the SoapUtilities namespace in an assembly named SoapUtilities.dll.

You are required to modify the Web.config file for an Extensible Markup Language (XML) Web Service

To ensure that encryption will occur prior to compression for the SOAP messages that are returned from that service.

What should you do? (Choose the correct configuration.)

- A. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="1"
group="1"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="2"
group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
- B. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="2"
group="0"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="1"
group="0"/>

```
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
C. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="1"
group="1"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="1"
group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="1"
group="0"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="2"
group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
```

Answer: D

Explanation: Soap extensions that are defined in the Web.config file are processed as follows:

(1) All SOAP extensions that are members of group 0 are executed

(2) All SOAP extensions that are members of group 1 are executed.

Furthermore, within each group, a SOAP extension that has higher priority (i.e. a number closer to zero) is executed before those with lower priority. This means that you have two choices to make sure that encryption takes place prior to compression:

(1) Make the EncryptionExtension class a member of a lower group than that of the CompressionExtension class.

(2) Give the EncryptionExtension class a higher priority than that of the CompressionExtension class.

Thus you need to assign the EncryptionExtension class the group 0 membership and the CompressionExtension class the group1 membership, i.e. option D.

Incorrect answers:

A: EncryptionExtension class should not have higher group membership than the CompressionExtension class. This will result in compression occurring before encryption.

B: EncryptionExtension class should not have a lower priority number than the CompressionExtension class, it will result in Compression before Encryption.

C: In this option the Priorities assign to both these classes are the same. This is incorrect.

QUESTION 53

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently installing the Microsoft Web Services Enhancements (WSE) 3.0 framework on your development computer. At present the WSE configuration settings are not enabled on your computer.

You are required to modify the Web.config file for an ASP.NET application to enable it to support WSE configuration settings.

What should you do? (Choose the correct configuration.)

A. <configuration>

<appSettings>

<add

key="microsoft.web.services3" value=Microsoft.Web.Services3.Configuration.WebServicesConfiguration, Microsoft.Web.Services3, Version = 3.0.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35/>

</appSettings>

</configuration>

B. <configuration>

<appSettings>

<add key="wse" value="Microsoft.web.services3"/>

</appSettings>

<microsoft.web.services3>

</microsoft.web.services3>

</configuration>

C. <configuration>

<configSections>

<section

name="microsoft.web.services3" type="Microsoft.Web.Services3.Configuration.WebServicesConfiguration, Microsoft.Web.Services3, Version=3.0.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>

</configSections>

<microsoft.web.services3>

```
</microsoft.web.services3>
</configuration>
D. <configuration>
<appSettings>
<add key="
microsoft.web.services3" value="Microsoft.Web.Services3.Configuration.WebServicesConfiguration,
Microsoft.Web.Services3, Version=3.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35
</appSettings>
<microsoft.web.services3>
</microsoft.web.services3>
</configuration>
```

Answer: C

Explanation: You need to specify the configuration settings handler in the Web.config file. This will enable ASP.NET to interpret settings that it does not understand by default.

Incorrect answers:

A, B, D: You should not specify the configuration settings section handler in the appSettings element because this element is used to specify application-specific configuration information.

QUESTION 54

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The implementation of policies for Web applications forms part of your responsibilities. You deployed a Microsoft Web Services Enhancements (WSE) 3.0-enabled Web service application to a production server. Each Web service that is implemented in the application has a Policy attribute applied. This attribute specifies the name of a policy in a policy file. The production server has the Microsoft.NET Framework 2.0 installed, but not Microsoft Visual Studio 2005. You are required to modify the Web service on the production server to use a different set of policies than those that were used during the development.

What should you do?

- A. Create a new policy file on the server manually.
Specify the policies to be used in this policy file.
Execute the policies at run time by creating the appropriate SOAP extension.
Specify the SOAP extension in the Web.config file.
- B. The names of all the policies in the existing policy file must be changed.
Modify the policies so that it is applicable in the production environment.
- C. Create a new policy file on the server manually.
Configure the Web.config file to use this policy file.
Specify the policies to be used in this policy file.
- D. The names of all the policies in the existing policy file must be changed.

Execute the policies at run time by creating the appropriate SOAP extension.
Specify the SOAP extension in the Web.config file.

Answer: C

Explanation: A policy file that contains all the applicable policies for the production environment must be created manually and to configure these policies you need to specify this policy file in the Microsoft.web.services3 section of the Web.config file.

Incorrect answers:

A: Soap extensions should not be created to execute policies. The policies must be executed prior to SOAP extensions because the policies will determine which SOAP extensions get executed.

B: The names of the policies should not be changed. In this case each policy attribute that is applied to a Web service specifies the name of a policy, thus if you change the names of the policies in the policy file, the policies will cease being applicable to the Web Services.

D: Soap extensions should not be created to execute policies. The policies must be executed prior to SOAP extensions because the policies will determine which SOAP extensions get executed.

QUESTION 55

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Client applications forms part of your responsibilities at Certkiller .com. You are currently developing a client application that will retrieve data from two Extensible Markup Language (XML) Web Services.

1. The one Web service requires the use of username/password authentication.
2. The other Web service requires the use of Kerberos authentication.

You make use of the Web Services Enhancements (WSE) 3.0 proxy generation tool (wsseidl3.exe) to generate the proxies to the two Web services that requires the different authentications. To this end you create a policy file that specifies the authentication requirements. Now you need to ensure that the requirements are enforces when you call each of the Web services.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. Call the SetPolicy method on each proxy.
- B. Apply a policy attribute to the class that contains the proxy instance.
- C. Pass the policy file name to this method.
- D. Pass the name of the policy to use this method.
- E. Pass the name of this policy to this attribute.

Answer: A, D

Explanation: You should call the SetPolicy method on each proxy, passing to it the

name of the policy to use wsewsdl3.exe generated Web service classes are derived from WebServicesClientProtocol. This base class defines a SetPolicy method that enables you to programmatically set the policy for the proxy.

Incorrect answers:

B: You should not apply the policy attribute to the class that contains the proxy instance.

C: The policy file name should not be specified as a parameter to the SetPolicy method.

One specifies the name of a policy, not the file that contains the policy.

E: Policy attributes should be applied to either Web Service classes or Web Service proxy classes.

QUESTION 56

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Client applications forms part of your responsibilities at Certkiller .com. You are currently developing a Microsoft Windows Forms client application that will retrieve data from an Extensible Markup Language (XML) Web Service. This XML Web Services requires Kerberos authentication. To this end you use the Web Services Enhancements (WSE) 3.0 proxy generation tool (wsewsdl3.exe) to generate a proxy to the Web service. You then create a policy file named policies.config. Policies.config specifies the authentication requirements..

You now need to specify the policy file in the app.config file
What should you do? (Choose the correct configuration.)

A. <configuration>

<appSettings>

<add key="microsoft.web.services3"value="policies.config"/>

</appSettings>

</configuration>

B. <configuration>

<appSettings>

<add key="wse3"value="policies.config"/>

</appSettings>

</configuration>

C. <configuration>

<microsoft.web.services3>

<policy filename="policies.config"/>

</microsoft.web.services3>

</configuration>

D. <configuration>

<system.web>

<webServices>

<soapExtensionTypes>

<add type="policies.config"/>

</soapExtensionTypes>

```
</webServices>  
</system.web>  
</configuration>
```

Answer: C

Explanation:

A microsoft.web.services3 element should be added to the Web.config file and you should apply the policy element to that element. You should also specify the policies.config file as the value of the filename attribute of the policy element. This will result in the WSE runtime to load the policies that are defined in the policies.config file.

Incorrect answers:

A: The policy file name should not be specified in the appSettings element because the WSE runtime does not use this element.

B: The policy file name should not be specified in the appSettings element. Even though you use this element to specify application-specific configuration information, the WSE runtime does not use this element.

D: The policies.config should not be specified as a SOAP extension type. The WSE runtime does not process the soapExtensionTypes element to load policy files.

QUESTION 57

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You developed a Web Services Enhancements (WSE) 3.0-enabled Web service that will be accessed by Web service clients over the Internet. You then move the Web service from a server named Certkiller -SR01 to a server named Certkiller -SR02. The Web service was hosted by Microsoft Internet Information Services (IIS) 6.0 on Certkiller -SR01. Certkiller -SR02 on the other hand has no Web server software allowed. Both Certkiller -SR01 and Certkiller -SR02 have .NET Framework 2.0 and WSE 3.0 installed.

You now need to modify the Certkiller -SR02 environment to accommodate access to the Web service for the Web service clients. In your solution you must ensure that there is no need for changes by the Web service clients other than specifying a new Web service endpoint.

What should you do?

A. Host the Web service in a custom application and listen for Web service requests using the SoapReceivers class.

B. Host the Web service in a COM+ library application and listen for Web service requests using the SoapReceivers class.

C. Host the Web service in a custom application and listen for Web service requests using the RemotingConfiguration class.

D. Use Microsoft Visual Studio 2005 Development Web server to host the Web service

and listen for Web service requests using the SoapReceivers class.

Answer: A

Explanation: Hosting the Web service in a custom application will allow you to use TCP to provide access to the Web service. Using SoapReceivers class to listen for Web service requests will ensure that whenever a TCP request arrives that matches the endpoint, that the Web service class will be instantiated to service the request.

Incorrect answers:

B: This option is only partly correct. However, you should not host the Web service in a COM+ library application because COM+ library applications run their client applications' processes. And as such they are incapable of supporting remote access.

C: This option is correct except for the part that states that you should make use of the RemotingConfiguration class to listen for Web requests. This would require the Web service clients to make use of Microsoft .NET Remoting which in turn means that client configuration changes will be required. The question pertinently states that your solution you must ensure that there is no need for changes by the Web service clients other than specifying a new Web service endpoint.

D: You should not host the Web service by using the Visual Studio 2005 Development Web server. This Web server accepts requests from local computer only.

QUESTION 58

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You are currently developing an Extensible Markup Language (XML) Web service. This service must be accessible over Transmission Control Protocol (TCP). The Web service will not return responses to Web service clients. Now you need to implement the appropriate class that represents the Web service. You thus need to decide where to derive the class from.

What should you do?

- A. You should derive the class from SoapClient.
- B. You should derive the class from SoapReceiver.
- C. You should derive the class from SoapSender.
- D. You should derive the class from WebService.

Answer: B

Explanation: Deriving the class from the SoapReceiver will allow you to make use of TCP to provide access to the Web service. SoapReceivers class can be used to listen for Web service requests over TCP. THE Web service client should call the SendOneWay method of the SoapClient class to send a SOAP requests without waiting for a SOAP response.

Incorrect answers:

A: You should not derive the class from SoapClient. This class derives from SoapSender, and it allows you to send SOAP requests and not to receive them. The Web service client should call the SendOneWay method of the SoapClient class to send a SOAP requests without waiting for a SOAP response.

C: You should not derive the class from SoapSender as this class will then only allow you to send SOAP requests and not receive them.

D: The WebService class supports only HypertextTransfer Protocol (HTTP) Web service requests. Consequently you cannot make use of the WebService class in this case.

QUESTION 59

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You are currently developing a Web Services Enhancements (WSE) 3.0 Web service that will be destined to provide geographical mapping services to some governmental departments. You now need to create a Web method named ObtainImage that will accept global positioning system (GPS) coordinates and return an aerial image corresponding to the location. You thus enable Message Transmission Optimization Mechanism (MTOM) for the Web service. Now you need to decide on an appropriate value that should be returned from the Web method that is capable of supporting MTOM. What should you do?

- A. A Byte array should be returned from the Web method.
- B. A Bitmap instance should be returned from the Web method.
- C. An Image instance should be returned from the Web method.
- D. A BinaryReader instance should be returned from the Web method.

Answer: A

Explanation: Returning a Byte array will be the solution. MTOM works exclusively with Byte arrays. Thus you should convert the image to a Byte array that is returned from the Web method. MTOM allows Web services and Web service clients to transmit large amounts of data as secure binary attachments.

Incorrect answers:

B: Returning a Bitmap instance will not work because MTOM only works with Byte arrays.

C: Returning an Image instance will not work because MTOM only works with Byte arrays.

D: Returning a BinaryReader instance will not work because MTOM only works with Byte arrays.

QUESTION 60

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You make use of Microsoft Visual Studio 2005 to create a Microsoft ASP.NET Web application. You enable Web Services Enhancements (WSE) 3.0 for this application. The Web application is destined to listen for SOAP requests over Hypertext Transfer Protocol (HTTP) and forward them to the appropriate Web servers based on the content of the requests. To this end you need to configure the Web application to meet this requirement.
What should you do?

A. A referral cache file should be added to the Web application and then configure the referral cache file with routing instructions that forward SOAP requests to the appropriate Web server.

Reference the referral cache file in the Web.config file of the Web application.

B. A policy file should be added to the Web application and then configure the policy file with custom policies and assertions that redirect SOAP requests to the appropriate Web Server.

Reference the policy file in the Web.config file for the Web application.

C. Create a SoapHttpRequest derived class and register the class as an HTTP handler for the .asmx file extension.

Override the ProcessRequestMethod method to return an instance of the Uri class based on the contents of a SOAP request.

D. Create a SoapReceiver derived class and register the class to listen for HTTP requests. Override the Receive method and set the ContextAddressing.ReplyTo property of the SoapEnvelope instance that represents the request message to the destination that represents the appropriate Web server.

Answer: C

Explanation

: Making use of content-based routing to forward the SOAP requests would be the best solution. To effect this solution you will need to first register a SoapHttpRequest-derived class and register it as an HTTP handler for the .asmx file extension. This will allow the application to handle Web service requests. You should then override the ProcessRequestMessage method of the SoapHttpRequest-derived class. This method accepts a SoapEnvelope instance that represents the SOAP message and returns an instance of the Uri class that specifies the URL to which the request should be forwarded. Thus allowing you to examine the SOAP message to determine the Web server to which it should be sent.

Incorrect answers:

A: There is no need to configure routing instructions in a referral cache in this case.

Referral cache files allow one to configure static routing. They allow one to route SOAP

requests based on a URL. They do not allow one to route SOAP requests based on the contents of SOAP messages.

B: You should not configure custom policies and assertions to redirect SOAP requests. Policies and assertions can be applied to WSE-enabled Web services and Web service proxies. However, in this case the application does not host any Web services. Its purpose is to redirect Web service requests to the appropriate Web servers.

D: There is no need to override the Receive method of a SoapReceiver-derived class and setting the Context.Addressing.ReplyTo property of the SoapEnvelope instance that represents the request message. Though you can make use of the SoapReceiver class to listen for incoming SOAP messages, the Context.Addressing.ReplyTo property of the SoapEnvelope class represents the destination to which responses should be sent. In this case you need to forward request messages.

QUESTION 61

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as an Internet Auctioneer. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

You have been instructed to develop an OrderProcessor class that is responsible for charging a customer's credit card, notifying the shipping department of the particular product that must be shipped, as well as updating the product inventory database. A COM+ application will be hosting the OrderProcessor class. To this end you need to create the class definition.

What should you do? (Choose the appropriate code segment.)

- A. `public class OrderProcessor : WebService`
{
}
- B. `public class OrderProcessor : ServicedComponent`
{
}
- C. `public class OrderProcessor : MarshalByRefObject`
{
}
- D. `public class OrderProcessor : MarshalByValueComponent`
{
}

Answer: B

Explanation: It is stated in the question that a COM+ application is hosting the class and thus the class must derive either directly or indirectly from the ServicedComponent. The ServicedComponent provides the database for all classes that need to make use of COM+ services. The OrderProcessor class should be derived from ServicedComponent.

Incorrect answers:

A: The OrderProcessor class should not be derived from WebService. This class provides a base class for Microsoft ASP.Net Web services which allows you to access Session and application instances directly.

C: The OrderProcessor class should not be derived from MarshalByRefObject because those types are those that cannot be serialized across an application domain and whose methods must execute remotely. ServicedComponent derives directly from MarshalByRefObject.

D: The OrderProcessor class should not be derived from the MarshalByValueComponent. This class represents marshal-by-value types that can be serialized across an application and whose methods can execute locally.

QUESTION 62

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

The exhibit below illustrates the currently existing class definition:

Exhibit:

```
public class PropertyManager : ServicesComponent
{
    public void MoveInNewCustomer(Customer customer, Unit unit)
    {
    }
}
```

Client applications call the MoveInNewCustomer method to move a new customer into a unit. You have been instructed to ensure that this process occurs within the context of a transaction. If a transaction does not already exist when this method is called, a transaction should be created. Exclusively in the event of an exception being thrown you want the transaction to abort.

To this end you need to modify the class to meet these requirements.

What should you do? (Choose the correct code segment.)

A. [Transaction(TransactionOption.RequiresNew)]

```
public class PropertyManager : ServicedComponent
{
    public void MoveInNewCustomer(Customer customer, Unit unit)
    {
    }
}
```

B. [Transaction(TransactionOption.Required)]

```
public class PropertyManager : ServicedComponent
{
    [Autocomplete]
    public void MoveInNewCustomer(Customer customer, Unit unit)
    {
    }
}
```

```
}  
C. [Transaction(TransactionOption.Supported)]  
public class PropertyManager : ServicesComponent  
{  
    public void MoveInNewCustomer(Customer customer, Unit unit)  
    {  
    }  
}  
D. [Transaction(TransactionOption.RequiresNew)]  
public class PropertyManager : ServicedComponent  
{  
    public void MoveInNewCustomer(Customer customer, Unit unit)  
    {  
    }  
}
```

Answer: B

Explanation: You should apply the Transaction attribute to the class and set its parameter to TransactionOption.Required. This will indicate that the method must execute in the context of a COM+ transaction. If the caller of the method is executing within a transaction, then this transaction is used. If not then a new transaction is created. The AutoComplete attribute should also be applied to this method as it will indicate that the method transaction should commit automatically if the method executes and returns without an exception being thrown. If an exception is thrown, the transaction should abort automatically regardless of the applied AutoComplete attribute.

Incorrect answers:

A: The Transaction attribute parameter should not be set to TransactionOption.RequiresNew as this will indicate that the method must execute within the context of a new COM+ transaction.

C: The Transaction attribute parameter should not be set to TransactionOption.Supported as this will indicate that the method must execute only within the caller's transaction. If the caller is not executing within a transaction, then the method will not execute within the context of a transaction.

D: The Transaction attribute parameter should not be set to TransactionOption.RequiresNew as this will indicate that the method must execute within the context of a new COM+ transaction.

QUESTION 63

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You implemented a strong-named managed assembly that makes use of Enterprise Services. The assembly is not registered for use within a COM+ context. And no RunInstaller attributes have been applied to any of the classes in the assembly. You

have been instructed to register the assembly with COM+ to accommodate the COM clients.

What should you do?

- A. Install the assembly into the COM+ catalog by running the Regsvcs.exe utility. Then install the assembly into the global assembly cache (GAC) by running the Gacutil.exe utility.
- B. Install the assembly into the global assembly cache (GAC) by running the GacUtil.exe utility. Then install the assembly into the COM+ catalog by running the Regsvcs.exe utility.
- C. Install the assembly into the COM+ catalog by running the Regsvcs.exe utility. Then install the assembly's configuration in the registry by running the InstallUtil.exe utility.
- D. Install the assembly into the global assembly cache (GAC) by running the GacUtil.exe utility. Then install the assembly's configuration in the registry by running the InstallUtil.exe utility.

Answer: B

Explanation: Managed assemblies that are hosted by COM+ applications must be installed in the GAC before COM+ clients can use them. Then you should run the Regvcs.exe utility as this utility will allow you to install a managed assembly into the COM+ catalog.

Incorrect answers:

- A: The Regvcs.exe utility should not be run prior to running the Gacutil.exe utility because you cannot register assemblies with COM+ for use by COM clients if they do not already exist in the GAC.
- C: The Regvcs.exe utility should not be run before the InstallUtil.exe utility. You first need to install the assembly into the GAC before running GacUtil.exe.
- D: The InstallUtil.exe utility should not be run after you have run the GacUtil.exe utility. The InstallUtil.exe utility executes custom installers that are defined in an assembly. And custom installers are classes that derive from Installer and that have the RunInstaller attribute applied already.

QUESTION 64

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You are creating a class named PropertyManager. PropertyManager will be registered with COM+ services and will be hosted in a COM+ application called PropertyManagement. To this end you need to apply an attribute to the PropertyManager class to ensure that only COM+ components in the PropertyManagement application can instantiate the PropertyManager class. You thus need to select the appropriate code segment to meet the requirements.

What should you do?

- A. You should use the [SecureMethod] code segment.
- B. You should use the [PrivateComponent] code segment.
- C. You should use the [ComponentAccessControl] code segment.
- D. You should use the [SecurityRole("PropertyManagement")] code segment.

Answer: B

Explanation: The PrivateComponent attribute ensures that only COM+ components that are hosted in the same COM+ application can access the class.

Incorrect answers:

- A: The SecureMethod attribute will ensure that callers invoke methods of COM+ components through interfaces only. This is not what is required in this case.
- C: The ComponentAccessControl attribute will enforce component-level security access checks for a COM+ component. This is not what is required in this case.
- D: There is no need to apply the SecurityRole attribute to the class because this attribute ensures that the identity of the caller maps to a specific role in the COM+ catalog.

QUESTION 65

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You have developed a serviced component that will be used by both managed and unmanaged applications within Certkiller .com. A remote computer will be hosting this serviced component. The serviced component will be accessible through DCOM. The computers that host the client applications have the .NET Framework 2.0 installed. You have received instruction to allow both managed and unmanaged client applications to reference the serviced component.

What should you do?

- A. Copy the serviced component to each client computer that must access the serviced component using the XCOPY tool.
A reference to each client computer should be added to the serviced component's assembly.
- B. Run the TypeLibrary Importer (Tlbimp.exe) tool against the serviced component assembly.
Copy the output file to the runtime directory of each client application.
A reference should be added to the output of each client application.
- C. A proxy for the COM+ application that hosts the component should be exported into a Microsoft Windows Installer (MSI) package using the Component Services tool.
Execute the package on the computers that contain the client applications.
A reference to the generated assembly should be added to each client application.
- D. The RunInstaller attribute should be added to each class in the serviced component assembly.

Run the Installer tool (InstallUtil.exe) on each client computer that must assess the serviced component.

A reference to the serviced component's assembly should be added to each client application.

Answer: C

Explanation: A proxy for the COM+ application that hosts the component should be exported into an MSI package. Then you should execute the proxy component into the COM+ catalog on the client computers. This also installs the GAC. Then a reference to this assembly should be added to each client application. This can be done since all the computers have the .NET Framework installed.

Incorrect answers:

A: XCOPY should not be used to copy the serviced component to each client computer as it will not register the component in the COM+ catalog.

B: The Tlbimp.exe generates a managed assembly from a type library, but then unmanaged client applications cannot directly access components in managed assemblies.

D: The Services component's assembly is a managed assembly, therefore you should not add a reference to the serviced component's assembly to each client application. If then you will deny unmanaged client applications from directly referencing it. Also you should not assign the RunInstaller attribute to each class in the serviced component's assembly. This attribute will indicate that the Installer tool must execute for the associated class when the assembly is installed, however, then you should apply the RunInstaller attribute to Installer-derived classes.

QUESTION 66

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You have received instruction to create an instance of the PropertyManager class from a client application. Following are the circumstances that you need to keep in mind in your attempts to accomplish the task at hand:

1. A class named PropertyManager exists in an assembly named PropertyManagement.dll.
2. The class and component are registered with COM+ services.
3. The COM+ application that hosts this class is configured as a server application.

What should you do? (Choose the correct code segment.)

- A. `PropertyManager propertyManager = (PropertyManager)Activator.GetObject(typeof(PropertyManager),"COM+");`
- B. `PropertyManager propertyManager = (PropertyManager)AppDomain.CurrentDomain.CreateInstanceFrom("PropertyManagement.dll","PropertyM`
- C. `PropertyManager propertyManager = new PropertyManager();`
- D. `PropertyManager propertyManager =`

(PropertyManager)Activator.CreateInstanceFrom("PropertyManagement.dll","PropertyManagement.Propert

Answer: C

Explanation: An instance of the PropertyManager class should be created by calling its constructor. Then the Enterprise Services infrastructure will return a proxy instance that you application uses to make calls across application domain boundaries.

Incorrect answers:

A: The GetObject method of the Activator class should not be used to create an instance of the PropertyManager class. This method will require that the remote object be accessible at a specific URL and COM+ services do not allow objects to be accessed by URL's.

B: Albeit possible to call the CreateInstanceFrom method of the AppDomain class, you should not cast this instance to PropertyManager. It will return an instance of ObjectHandle and to obtain the real object you will need to call the Unwrap method of the ObjectHandle instance.

D: Even though it is possible to call the CreateInstanceFrom method of the Activator class, you should not cast this instance to PropertyManager. It will return an instance of ObjectHandle and to obtain the real object you will need to call the Unwrap method of the ObjectHandle instance.

QUESTION 67

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You have received instruction to develop and order fulfillment application. This order fulfillment application must send multiple messages to the queue in the case of it receiving an order. After the application sends the messages to the queue, it must update an inventory database accordingly. In the event of an error occurring for one of the messages while it is busy updating the database, the application must automatically remove all messages that were sent for the current order. In the event of the database update being successful, another application on the same computer must read and process the messages. Only these two applications must be allowed to access the messages.

Now you need to create the message queue manually.

What should you do?

- A. A non-transactional public queue must be created.
- B. A transactional public queue must be created.
- C. A non-transactional private queue must be created.
- D. A transactional private queue must be created.

Answer: D

Explanation: Creating a transactional private queue will allow messages to be rolled

back in the event of an error occurring during the database update. In this way, the messages that are sent in the context of the same transaction are either committed or rolled back as a single unit.

Incorrect answers:

A: Since public queues are available to other computers as well, you should not create a non-transactional public queue because only the local computer should have the queue available in this case.

B: This will not fulfill the requirement of these two applications being on the same computer since a public queue will result in availability to other computers as well.

C: A non-transactional private queue will prevent multiple messages from being committed or rolled back as a single unit.

QUESTION 68

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

On a server named Certkiller -SR01 there is a message queue named OrderProcessorQueue which is configured to be available only on Certkiller -SR01. You need to programmatically delete the queue from another computer.

What should you do?

A. You should use the following code segment:

```
MessageQueue.Delete("@. Certkiller -SR01\OrderProcessorQueue");
```

B. You should use the following code segment:

```
MessageQueue.Delete("@.\ Certkiller -SR01\OrderProcessorQueue");
```

C. You should use the following code segment:

```
MessageQueue.Delete("@. Certkiller -SR01\Private$\OrderProcessorQueue");
```

D. You should use the following code segment:

```
MessageQueue.Delete("@.\ Certkiller -SR01\Private$\OrderProcessorQueue");
```

Answer: C

Explanation: Calling the Delete method of the MessageQueue class and passing the full path of the queue as a parameter is the correct procedure to follow. The full path includes the name of the server computer on which it exists, as well as any queue-specific syntax, such as Private\$ for private queues. Because the queue is configured to Certkiller -SR01 only, it is a private queue.

Incorrect answers:

A: Passing the " Certkiller -SR01\OrderProcessorQueue" as a parameter to the Delete method is incorrect since the path does not include the "Private\$" syntax.

B: You should not pass the ".\ Certkiller -SR01\OrderProcessorQueue" as a parameter to the Delete method because this path specifies the (.) symbol at the beginning of the name. This symbol actually represents the local computer. In this case the queue exists on a computer that is not the same one from where you are deleting it. Also this path does not

include "Private\$" syntax.

D: You should not pass the " Certkiller -SR01\Private\$\OrderProcessorQueue as a parameter to the Delete method. This path specifies the (.) symbol at the beginning of the name when this symbol actually represents the local computer. In this case the queue exists on a computer that is not the same one from where you are deleting it.

QUESTION 69

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You created an instance of the MessageQueue class named queue. You need to read a message from the queue and block the current thread until it is read. However, in the event of 15 seconds elapsing since you begin reading the queue, you want to resume the current thread. In the event of the message being read within the 15 seconds, you want to remove it from the queue. You thus need to write the appropriate code to accomplish this goal.

What should you do?

A. You should use the following code segment:

```
queue.Peek(TimeSpan.FromSeconds(15));
```

B. You should use the following code segment:

```
queue.Receive(TimeSpan.FromSeconds(15));
```

C. You should use the following code segment:

```
queue.BeginPeek(TimeSpan.FromSeconds(15));
```

D. You should use the following code segment:

```
queue.BeginReceive(TimeSpan.FromSeconds(15));
```

Answer: B

Explanation: You should call the Receive method because this method reads the next message from the queue and blocks the current thread until it is read. By passing a TimeSpan instance as a parameter you have control over the amount of time the current thread is allowed to wait until the message becomes available. When this specified time elapses, the current thread resumes. By calling the Receive method, you also cause the message to be deleted from the queue after it is read.

Incorrect answers:

A: Calling the Peek method will simply peek at the next message in the queue without deleting it.

C: Calling the BeginPeek method will result in the method beginning to peek at the next message asynchronously and not blocking the current thread.

D: Calling the BeginReceive method is incorrect. The BeginReceive method begins reading the next message asynchronously and does not block the current thread.

QUESTION 70

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You are currently creating a message queue programmatically. This message queue will be accessed by two applications. Each message represents an instance of a public class named OrderInfo. The OrderInfo class does not derive from ServicedComponent, and it does not implement any interfaces.

You need to ensure that the state of the class is preserved when a message is sent to and received from the message queue. This state of the class would include the values of private members. The message receiving application understands only the basic .NET Framework classes, and the OrderInfo class. To this end you need to specify the formatter that will be used to serialize and deserialize messages. What should you do?

- A. You need to specify and instance of the custom formatter class.
- B. You need to specify and instance of the ActiveXMessageFormatter.
- C. You need to specify and instance of the BinaryMessageFormatter class.
- D. You need to specify and instance of the XmlMessageFormatter class.

Answer: C

Explanation: The BinaryMessageFormatter class can be used to serialize and deserialize all members of a class, including private members.

Incorrect answers:

A: The custom formatter class should only be used if none of the default formatter classes are acceptable. In this case the receiving application understands only the basic .NET Framework classes and the OrderInfo class. The OrderInfo class cannot be used as the custom formatter because it does not implement the IMessageFormatter interface which is a requirement when implementing custom formatters.

B: The ActiveXMessageFormatter is used to serialize COM and COM+ components. In this case, the class that the message represents does not derive from ServicedComponents and only managed classes derived from ServicesComponents are also COM+ components.

D: An XmlMessageFormatter class cannot be used to serialize and deserialize private members of a class.

QUESTION 71

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You created an instance of the MessageQueue class named queue. You need to read a message from the queue and block the current thread until it is read. However, if in the event of 15 seconds elapsing since you began reading the queue; you want to resume the current thread. Regardless of whether the message is read you want it to remain in the queue. You thus need to write the appropriate code to accomplish this

goal.
What should you do?

- A. You should use the following code segment:
`queue.Peek(TimeSpan.FromSeconds(15));`
- B. You should use the following code segment:
`queue.Receive(TimeSpan.FromSeconds(15));`
- C. You should use the following code segment:
`queue.BeginPeek(TimeSpan.FromSeconds(15));`
- D. You should use the following code segment:
`queue.BeginReceive(TimeSpan.FromSeconds(15));`

Answer: A

Explanation

: You should call the Peek method. This method will read the next message from the queue and block the current thread until it is read. You can control the amount of time the current thread is allowed to wait until the message becomes available by passing a TimeSpan instance as a parameter. When the allotted amount of time elapses, the current thread will resume. By calling the Peek method, you will cause a message to remain in the queue after it is read. (Literally peeking)

Incorrect answers:

- B: Receive method because this method reads the next message from the queue and blocks the current thread until it is read. By calling the Receive method, you also cause the message to be deleted from the queue after it is read.
- C: Calling the BeginPeek method will result in the method beginning to peek at the next message asynchronously and not blocking the current thread.
- D: Calling the BeginReceive method is incorrect. The BeginReceive method begins reading the next message asynchronously and does not block the current thread.

QUESTION 72

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

After receiving the instruction, you complied and have just created a private message queue on an application server. You have configured the message queue in such a way that whenever a message arrives in the queue, you will need to simultaneously run two executables to process the message. To this end you need to create a rule or more rules and triggers to ensure that these two executables run simultaneously when a message arrives in the queue.

What should you do?

- A. Create two rules and two triggers. Then apply each rule to only one trigger.
- B. Create a rule and two triggers. Then apply the rule to each trigger.
- C. Create one rule and one trigger. Then apply the rule to the trigger.

D. Create two rules and one trigger. Then apply both rules to the trigger.

Answer: A

Explanation: A trigger can execute whenever you peek at or retrieve a message from a specific message queue. It is possible that a trigger can contain more than one rule or even no rules; however, in a situation where you want the two executables to run simultaneously, you should specify the conditions that should be met to execute the rule's action. By creating a trigger for each rule you will be allowing the two executables to be invoked simultaneously when the triggers are executed.

Incorrect answers:

B: You should not create only one rule. You need to keep in mind that you must run two executables simultaneously and thus need to create a rule for each executable since a rule can execute at most one executable.

C: You should not create only one trigger, even though it is possible that a trigger may contain more than one rule, the trigger executes the action associated with each rule within a specified sequence. This means that the two executables will be triggered to run but not simultaneously.

D: this option will is possible, but will not allow both executables to run simultaneously.

QUESTION 73

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates a class definition:

Exhibit:

```
Public Class MarketService
```

```
Friend Function ObtainMarket(ByVal mobilePhoneNumber As String) As  
String
```

```
Return String.Empty
```

```
End Function
```

```
End Class
```

You received instruction to modify this class so that it becomes a Web service, a Web service that will allow internal applications to invoke ObtainMarket as a Web method. You need to ensure that the Web method does not make use of session state and that it must make use of the default namespace.

What should you do?

A. Change the access modifier for the ObtainMarket method to Public.

Then apply the WebService attribute to the MarketService class.

B. Change the access modifier for the ObtainMarket method to Protected.

Then apply the WebMethod attribute to the ObtainMarket method.

C. Change the access modifier for the ObtainMarket method to Public.

Then apply the WebMethod attribute to the ObtainMarket method.

- D. Derive the MarketService class from SoapHttpClientProtocol.
Then apply the WebMethod attribute to the ObtainMarket method.
- E. Derive the MarketService class from WebService.
Then apply the WebMethod attribute to the ObtainMarket method.

Answer: C

Explanation: Only public methods can be exposed as Web methods. Thus you need to change the access modifiers to public. And you should also apply the WebMethod attribute to the ObtainMarket method as this attribute will indicate that the public method should be exposed as Web methods.

Incorrect answers:

- A: The WebService attribute will allow you to specify the namespace and description for the Web service. This is not required to invoke Web methods. (In cases where no namespace has been specified, use will be made of the default namespace.)
- B: Since only Public methods can be exposed as Web methods, you should not change the access modifier to Protected.
- D: The SoapHttpClientProtocol base class allows for Web service clients to make SOAP calls to Web methods. This is not what is required.
- E: The WebService base class is an optional class as it provides direct access to session and application instances for session state. It is mentioned in this question that the Web methods does not make use of session state.

QUESTION 74

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The access control to Web services is part of your responsibility. To this end you are currently exposing an existing class as an Extensible Markup Language (XML) Web service. You need to ensure that this Web service is accessible exclusively accessible to Web service clients within the Certkiller .com domain. To comply with this requirement you need to change the access modifiers on methods that must be exposed as Web methods.

What should you do?

- A. For each Web method, use the Internal or Friend Access modifier.
- B. For each Web method, use the Private Access modifier.
- C. For each Web method, use the Public Access modifier.
- D. For each Web method, use the Protected Access modifier.

Answer: C

Explanation: Since only Public methods can be exposed as Web methods, you should make use of the Public Access modifier for each Web method.

Incorrect answers:

- A: You cannot use the Internal or Friend Access method, only Public Access method can

be exposed as Web methods.

B: You cannot use the Private Access method, only Public Access method can be exposed as Web methods.

D: You cannot use the Protected Access method, only Public Access method can be exposed as Web methods.

QUESTION 75

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The following exhibit illustrates the class definition for a data processing Web service:

Exhibit:

```
<WebService(Namespace:="urn:DataProcessingService")> _  
Public Class DataProcessingService  
Inherits Webservice  
<WebMethod(MessageName:="ProcessDataSet")> _  
Public Sub Process(ByVal dataSet As Dataset)  
End Sub  
End Class
```

You have been instructed to apply an attribute to the Process method that will result in an immediate return to the caller without invoking a SOAP response. You need to ensure that the attribute that you apply in your solution is Web Services-Interoperability (WS-1) compliant. You thus need to make use of a code segment.

What should you do?

- A. Use the <OneWay> code segment.
- B. Use the <WebMethod(BufferResponse:=false)> code segment.
- C. Use the <WebMethod(BufferResponse:=true)> code segment.
- D. Use the <SoapDocumentMethod(OneWay:=true)> code segment.
- E. Use the <SoapRpcMethod(OneWay:=true)> code segment.

Answer: D

Explanation: If you want the Web method to be WS-1 compliant then you should apply the SoapDocumentMethod attribute to the Process method. Setting the attribute of the OneWay property to true indicates an immediate return to the caller without a response when it is invoked.

Incorrect answers:

A: You should not apply the OneWay attribute to the Process method. This attribute is used with .NET Remoting components when a method should immediately return to the caller without a return value.

B: You should not apply a second Web method. Only one WebMethod attribute can be applied to a Web method. Furthermore, the BufferResponse property of the WebMethod attribute does not determine if execution returns to the caller immediately when the

associated method is invoked. It determines whether the entire response is placed in memory before it is sent to the caller. However, in this case no responses should be returned.

C: One does not apply a second Web method as suggested in this option.

E: RPC style is not WS-1 compliant.

QUESTION 76

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates a class definition in a Web service project:

Exhibit:

```
Public Class MarketService
```

```
Public Function ObtainMarket(ByVal mobilePhoneNumber As String) As  
Point
```

```
Throw New SoapException("Not implemented", New  
XmlQualifiedName("error"))
```

```
End Function
```

```
End Class
```

You have received instruction to configure the class in such a way so as to allow SOAP clients to invoke the ObtainMarket method.

What should you do?

- A. The class should be derived from WebService.
- B. The class should be derived from SoapHttpClientProtocol.
- C. The WebMethod attribute should be applied to the method.
- D. The WebService attribute should be applied to the class.

Answer: C

Explanation: The Webmethod attribute applied to the method will indicate that a public method should be exposed as a Web method of a Web service. Thus you should apply the WebMethod attribute to the method.

Incorrect answers:

A: Since the WebService base class is optional, and it provides direct access to the Session and Application instances, you should not derive the class from WebService.

B: You should derive a proxy class from this class in a SOAP client application. This will allow the client application to make SOAP calls via the proxy class to the Web service. Thus you should not derive the class from SoapHttpClientProtocol.

D: The WebService attribute will allow you to specify a namespace and description for the Web service; you should not apply the WebService attribute to the class.

QUESTION 77

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com is a Publishing and distribution company and works in joint ventures with many book stores that carries it products.

The provision of stock on hand updates to third party companies (the book stores) forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that provides stock on hand updates. To this end you created a Web method named GetStock that accesses the third party company's XML Web service to retrieve the required information.

Following are some factors that you need to keep in mind:

1. The third parties' XML Web Service updates it information regarding stocks once every hour.
2. Certkiller .com is charged for each call to the third party Web service.

It is thus essential that you limit the number of calls that the Certkiller .com Web service makes to the third party company's Web service:

1. Thus you apply the Webmethod attribute to the GetStock method.
2. You need to configure the attribute to limit the number of calls to the third party Web service.
3. You must ensure that no cookies are required.

What should you do?

- A. The CacheDuration property should be set to 3600
- B. The EnableSession property should be set to true.
- C. The MessageName property should be set to "ClientCache".
- D. The BufferResponse property should be set to false.

Answer: A

Explanation: This property specifies the number of seconds that a response from a Web method should be cached on a server. With this property set to 3600, you will limit the number of calls to the third party Web service by limiting the number of invocations of your GetStock Web method to once every hour.

Incorrect answers:

B: The EnableSession property indicates whether a session should be enabled to the Web method. Server-side session state, which includes the Application and Session objects, can use a lot a memory on the Web server. Session state requires the use of cookies as well. Thus you should not use this property.

C: The MessageName property distinguishes overloaded Web methods. In Web services Description Language (WSDL) documents, each Web method must be named uniquely and the MessageName property is involved in meeting this requirement. This is not what should happen in this scenario.

D: The BufferResponse property determines whether the entire response is placed in memory on the server before it is sent to the Web Service client. You should thus not set this property to false.

QUESTION 78

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The Extensible Markup Language (XML) Web service development forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that contains four Web methods. Each of these four methods accepts a different number of parameters and each method is configured to make use of remote procedure call (RPC) SOAP formatting. You must ensure that each of these four Web methods is capable of being exposed as a Web method by the Web service.

What should you do?

- A. The SoapDocumentMethod attribute should be applied to each of the four methods. Then set the RequestNamespace property of each attribute to a different value.
- B. The WebService attribute should be applied to the Web service's class. Then set the Namespace property of the attribute to "RPC".
- C. The WebMethod attribute should be applied to each of the four web methods. Then set the MessageName property of each attribute to a different value.
- D. The SoapRpcService attribute should be applied to the Web service's class. Then set the RoutingStyle property of the attribute to SoapServiceRoutingStyleRequestElement.

Answer: C

Explanation: When you overload Web methods, you need to specify a distinct message name for each web method because Web Services Description Language (WSDL) does not support overloaded operations. You thus need to apply the WebMethod attribute to each of the four methods and set the MessageName property of each of these attributes to a different value.

Incorrect answers:

- A: Because the Web methods must make use of RPC formatting, you should apply the SoapRpcMethod attribute to each of the four methods, you cannot apply both a SoapDocumentMethod attribute and a SoapRpcMethods attribute to the same method.
- B: The Namespace attribute of the WebService attribute allows you to designate an XML namespace for the operations that are supported by the Web Service, not to ensure exposure.
- D: Though it is possible to apply the SoapRpcService attribute to the class OR the SoapRpcMethod attribute to each method to support RPC formatting, it does not allow for overloaded methods to be exposed as Web methods. In this case the methods are already configured to make use of RPC formatting which actually indicates that one of the two attributes is already applied.

QUESTION 79

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All

servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates a configuration.

Exhibit:

```
<?xml version="1.0"?>
<dynamicDiscovery
xmlns="urn:schemas-dynamicdiscovery:disco.2007.02.19">
<exclude path="_vti_cnf" />
<exclude path="_vti_pvt" />
<exclude path="_vti_log" />
<exclude path="_vti_script" />
<exclude path="_vti_txt" />
<exclude path="Web References" />
</dynamicDiscovery>
```

You have just added the above configuration to a new file by means of using a text editor. You need to save this file to a production server to provide the Web service discovery.

What should you do?

- A. Use the .disco extension to save the file.
- B. Use the .vsdisco extension to save the file.
- C. Use the .wsdl extension to save the file.
- D. Use the .asmx extension to save the file.

Answer: B

Explanation

: Dynamic discovery documents are denoted by a file with .vsdisco extension. This will allow the Web service client to discover all Web services that exist at and below the virtual directory that contains the document. You should thus save the file using a .vsdisco extension.

Incorrect answers:

- A: The .disco extension is used to denote a static discovery document. This will not suffice under the circumstances.
- C: The .wsdl extension represents files what are Web Services Description Language (WSDL) documents. You should not make use of this extension to save the file to the production server.
- D: The .asmx extension represents a Web service endpoint. These types of files thus so not allow for dynamic discovery.

QUESTION 80

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your

responsibilities at Certkiller .com.

After receiving instruction you have just finished developing an ASP.NET Web application named WebServices. WebServices contains the Web services for each of the Certkiller .com clients. Microsoft Internet Information Services (IIS) 6.0 is hosting the Web application. And the Web application is configured in such a way so as to map host header names to client-specific virtual directories. Each Certkiller .com client has its own virtual directory. These virtual directories are located in a root virtual directory named WebServices.

The following exhibit illustrates an example of the virtual directory structure:

Exhibit:

WebSite

WebServices (Web Application)

Client A (VirtualDirectory)

WebService1.asmx

WebService2.asmx

Client B (VirtualDirectory)

WebService3.asmx

WebService4.asmx

Client C (VirtualDirectory)

WebService5.asmx

WebService6.asmx

You received further instructions to ensure that all Certkiller .com clients have the ability to discover all of the Web services that are implemented in the Web application for that client. You need to accomplish this task while also making provision for those Web services that is intended for future implementation. However, you also need to ensure that the Certkiller .com clients should not have the ability to discover implemented Web services intended for other clients. What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. A .vsdisco file should be added to each Certkiller .com client's virtual directory.
- B. A .disco file should be added to each Certkiller .com client's virtual directory.
- C. Both a .vsdisco and a .disco file should be added to the WebServices directory
- D. No .vsdisco or .disco files should be placed in the WebServices directory.
- E. A .vsdisco file should be placed in the WebServices directory.

Answer: A, D

Explanation: A file with a .vsdisco extension will allow for dynamic discovery. This will result in the Certkiller .com clients having the ability to discover all the Web services that exist at and below the virtual directory that contains the document. This means that each client will be able to discover all Web services that exist at and below its own virtual directory.

Incorrect answers:

B: You should not place a .disco file to each Certkiller .com client's virtual directory because this is a static discovery document. You should manually specify the Web

services that should be discovered in this document and the clients will then not be able to automatically discover the Web services that will be added in the future.

C: You should not place a .disco or a .vsdisco file in the WebServices directory. This will result in the violation of one of the requirements in the questions that states the no one Certkiller .com client should be able to discover Web services that are not intended for that specific client.

E: You should not place a .vsdisco file in the WebServices directory because you do not want the Certkiller .com clients to be able to discover the Web services that are not implemented for them.

QUESTION 81

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

After receiving instructions you have just completed the development and the deployment of an Extensible Markup Language (XML) Web service application. This XML Web service application contains ten (10) Web services. At present dynamic discovery on the Web server that hosts the application has been disabled. To this end you now need to configure the Web.config file of the application to allow Web service clients the ability to dynamically discover all the Web services. You also want to ensure that the Web service clients will be able to discover any future Web services that will be added.

What should you do? (Choose the correct configuration.)

A. <configuration>

<system.web>

<httpHandler>

<add verb="x.disco"

Type=System.Web.Services.Discovery.DiscoveryRequestHandler,

System.Web.Services,Version=2.0.0.0,

Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"

validate="false"/>

</httpHandlers>

</system.web>

</configuration>

B. <configuration>

<system.web>

<httpHandler>

<add verb="x.vsdisco"

Type=System.Web.Services.Discovery.DiscoveryRequestHandler,

System.Web.Services,Version=2.0.0.0,

Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"

validate="false"/>

</httpHandlers>


```
</system.web>
</configuration>
C. <configuration>
<system.web>
<httpHandler>
<add verb="x.wsdll"
Type=System.Web.Services.Discovery.DiscoveryRequestHandler,
System.Web.Services,Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"
validate="false"/>
</httpHandlers>
</system.web>
</configuration>
D. <configuration>
<system.web>
<httpHandler>
<add verb="x.asmx"
Type=System.Web.Services.Discovery.DiscoveryRequestHandler,
System.Web.Services,Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"
validate="false"/>
</httpHandlers>
</system.web>
</configuration>
```

Answer: B

Explanation: An Http handler should be added for all .vsdisco files. DiscoveryRequestHandler is the default handler class in ASP.NET 2.0. A file with the .vsdisco extension will allow a Web service client to dynamically discover all Web services that exist at and below the virtual directory that contains the document.

Incorrect answers:

A: A .disco file extension denotes a static discovery document. You will need to manually specify the Web services that should be discovered in this document. This will result in clients being unable to automatically discover the Web services that will be added in future.

C: A .wsdl handler denotes a Web Services Description Language (WSDL) document. This type of file will not provide for dynamic discovery of Web services.

D: An .asmx handler denotes a Web service endpoint and will thus not provide clients with the ability to automatically discover Web services.

QUESTION 82

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your

responsibilities at Certkiller .com.

After receiving instructions, you have just finished developing and deploying public and private Extensible Markup Language (XML) Web services to a production server. This production server has been configured with Microsoft Internet Information Services (IIS) 6.0. The Web services are located on different IIS virtual directories. Each of these IIS virtual directories hosts either public Web services or private Web services, but not both. Part of the instructions that you received also states that Web service clients must have the ability to discover the public Web services dynamically, but not the private Web services. The Web Service clients should also be granted the ability to dynamically discover any new public Web services that are added to an existing virtual directory.

To this end you now need to configure the server to meet these requirements. You should take care that your configuration does not prevent the discovery of Web services in new virtual directories unless you reconfigure the server.

What should you do? (Each correct answer presents part of the solution. Choose three.)

- A. Add a .disco file to the Web site's virtual root directory.
- B. Add a .vsdisco file to the Web site's virtual root directory.
- C. Do not add .vsdisco files anywhere on the server.
- D. Add the .vsdisco files to each virtual root directory that exposes public Web services.
- E. Configure the .disco file with reference to each public Web service.
- F. Configure the .disco file with reference to each .vsdisco file.

Answer: A, D, F

Explanation

: You need to add a static discovery document, i.e. a .disco file to the IIS root directory and dynamic discovery documents, i.e. .vsdisco files to each virtual directory that exposes public Web services. This way you can ensure that Web service clients have the ability to only discover the public Web services.

Incorrect answers:

B: You should not add .vsdisco files to the IIS root directory.

C: Adding a .vsdisco file anywhere on the server will expose the private Web services.

E: .disco files should not be configured to reference to each public Web service. This means that Web clients will not be able to not automatically discover new Web services that are added to existing virtual directories.

QUESTION 83

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Web Service applications forms part of your responsibilities at Certkiller .com. You have just developed an Extensible Markup Language (XML) Web service application by making use of Microsoft Visual Studio 2005. Now you need to deploy the project that contains the application to another computer on the Certkiller .com

network. The other computer intended to have the project deployed does not have Microsoft Internet Information Services (IIS) 6.0 installed. However, you need to deploy the project.

What should you do?

- A. Make use of the Copy Web Site utility and specify the file share location for the remote Web service application.
- B. Make use of the Publish Web Site utility and specify the URL for the remote Web service application.
- C. Make use of the Publish Web Site utility and specify the file share location for the remote Web service application.
- D. Make use of the Copy Web Site utility and specify the URL for the remote Web service application.

Answer: A

Explanation: Using the Copy Web Site utility and specifying the file share location for the remote Web service application will allow you to copy the project to a folder on the computer that does not have IIS 6.0 installed, by using the local file system; the project is simply the collection of the relevant files in the Web application's folder.

Incorrect answers:

- B: The Publish Web site utility is not used to copy projects, but rather to copy the application's runtime files.
- C: The Publish Web site utility is not used to copy projects, but rather to copy the application's runtime files.
- D: If you specify the URL for the remote Web service application, you would require Front Page Server Extensions to be installed on the target computer. But in the question it is already mentioned that the target computer does not have IIS installed.

QUESTION 84

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The ASP.NET Web application development forms part of your responsibilities at Certkiller .com. You are currently developing an ASP.NET Web application that contains three Web services and eight Web pages. You further received instructions to deploy the application to a production server named Certkiller -SR03. You need to ensure that no human-readable code is stored on the Web server when you deploy the application.

What should you do?

- A. The Web Application should be built in Visual Studio 2005.
Copy only the files in the bin folder to the production server using the XCOPY command.
- B. The Web application should be copied to Certkiller -SR03 using the Visual Studio 2005 Copy Web Site tool.

Select the option to copy only the files required to run the application.

C. The Web application should be published to Certkiller -SR03 using the Visual Studio 2005 Publish Web Site tool.

Unselect the checkbox that enables the "allow the precompiled site to be updatable" option.

D. The Web application should be published to Certkiller -SR03 using the Visual Studio 2005 Publish Web Site tool.

Select the checkbox that enables the "allow the precompiled site to be updatable" option.

Answer: C

Explanation: Publishing the Web application to Certkiller -SR03 will allow Visual Studio 2005 to precompile the application. Further you should also unselect the option that allows the precompiled site to be updatable. This will indicate that files with extensions like .aspx and .asmx should be precompiled and unavailable in human-readable form.

Incorrect answers:

A: Making use of the XCOPY command will yield Web pages that will contain human readable code. By default, the assemblies in the bin folder correlate with declarative code in Web pages, which are not copied to the bin folder during compilation. This will require that you copy the Web pages as well.

B: You cannot precompile Web pages into assemblies using the Copy Web Site tool. Besides Web pages contains human readable code.

D: When you select the option to allow precompiled site to be updatable, then the Web pages will exist on the Web server and Web pages contains human readable code.

QUESTION 85

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as a credit bureau.

The development of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will allow legitimate third parties to access credit scores, pull credit records, and update credit information for customers. You need to implement a Web method named ObtainCreditScore. ObtainCreditScore should accept a String parameter and return an integer. You need to make use of Remote Procedure Call (RPC) style for this Web method; you also need to make use of the Document style for all Web methods that will be implemented. To this end you need to make use of the appropriate code segment for the Web service.

What should you do?

A. `<WebService(Namespace:="urn: Certkiller ")>_
<SoapRpcService()>_`

```
Public Class CreditService
<WebMethod(>_
<SoapRpcMethod(>_
Public Function ObtainCreditScore(ByVal customerIdentifier As String)As Integer
return 0
End Function
End Class
B. <WebService(Namespace:="urn: Certkiller ")>_
Public Class CreditService
Inherits Web Service
{
<SoapRpcMethod(>_
Public Function ObtainCreditScore(ByVal customerIdentifier As String)As Integer
return 0
End Function
End Class
C. <WebService(Namespace:="urn: Certkiller ")>_
Public Class CreditService
<WebMethod(>_
<SoapRpcMethod(>_
Public Function ObtainCreditScore(ByVal customerIdentifier As String)As Integer
Return 0
End Function
End Class
D. <SoapRpcService(>_
Public Class WebService
Inherits WebService
<WebMethod(>_
<SoapRpcMethod(>_
Public Function ObtainCreditScore(ByVal customerIdentifier As String)As Integer
Return 0
End Function
End Class
```

Answer: C

Explanation: the WebMethod and SoapRpcMethod attributes should be added to the ObtainCreditScore Web method. The WebMethod attribute in essence makes the method accessible by Web service clients. And the SoapRpcMethods instructs the Web Services Description Language (WSDL) generator to set the style attribute to Rpc for the ObtainCreditScore operation element.

Incorrect answers:

A, B: You must not apply the SoapRpcService attribute to the class because it will instruct the WSDL generator to set the style attribute to rpc instead of document style.
D: The WebMethod attribute and NOT the SoapRpcService attribute should be applied to the ObtainCreditScore method to make the method accessible to the Web service clients.

QUESTION 86

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web Service named MarketService. This MarketService will be used by the Certkiller .com Marketing department. You are now required to create a Web method named ObtainMarket. The ObtainMarket Web method must return global positioning system (GPS) coordinates of a mobile phone given a mobile phone number.

In you development of the ObtainMarket Web method, you must ensure that it can be uniquely identified among all the Web services that are implemented by the Sales and Transport departments.

What should you do? (Choose the correct code segment.)

- A. <WebService(Name:="MarketService")> _
Public Class MarketService
Inherits WebService
<WebMethod(MessageName:="urn:gov:dot:MarketServices")> _
Public Function ObtainMarket(ByVal mobilePhoneNumber as String) As String
Return String.Empty
End Function
End Class
- B. <WebService(Namespace:="urn:gov:dot:MarketServices")> _
Public Class MarketService
Inherits WebService
<WebMethod()> _
Public Fuction ObtainMarket(ByVal mobilePhoneNumber As String) As String
Return String.Empty
End Function
End Class
- C. <WebService(Name:="MarketService")> _
Public Class LocationService
Inherits WebService
<WebMethod> _
Public Function ObtainMarket(ByVal mobilePhoneNumber As String)As String
Return String.Empty
End Function
End Class
- D. <WebService()> _
Public Class LocationService
Inherits WebService
<WebMethod>(MessageName:="urn:gov:dot:LocationServices")> _

```
Public Function ObtainMarket(ByVal mobilePhoneNumber As String)As String
Return String.Empty
End Function
End Class
```

Answer: B

Explanation: The namespace property of the WebService attribute should be set to a name that is unique within the organization. When WSDL is generated for the Web service, it will define the request and response messages that are associated with a Web method to be part of the namespace that you set, thus ensuring unique messages.

Incorrect answers:

A: The MessageName property allows you to uniquely identify an overloaded Web method, thus you should not set the MessageName property of the Web Method.

C: The Name property allows you to change the name of the WSDL element that represents the Web service, thus the name property should not be set to uniquely identify the Web method.

D: The MessageName property allows you to uniquely identify an overloaded Web method, thus you should not set the MessageName property of the Web Method.

C: Specify the bindings of a Web service application by using the

QUESTION 87

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

The following exhibit illustrates the class definition that currently exists for a Web Service.

Exhibit:

```
WebService(), SoapRpcService()> _
Public Class LicenseService
Inherits WebService
<WebMethod(), SoapRpcMethodAttribute()> _
Public Function ObtainPoints(ByVal licenceNumber as String) As Numeral
Return 0
End Function
<WebMethod(),SoapRpcMethodAttribute(ByVal state as String, ByVal licenseNumber
as String)
End Sub
End Class
```

You received instruction to apply the WebServiceBinding attribute to support the Web Service.

What should you do?

A. A WebServiceBinding attribute should be applied to the class.

Set the Attribute's Name property to Atlanta.

B. A WebServiceBinding attribute should be applied to the ObtainPoints method.

Set the Attribute's Name property to Atlanta.

C. Two WebServiceBinding attributes should be applied to the class.

Set the Name property of the one attribute to Default and the other to Atlanta.

D. A WebServiceBinding attribute should be applied to the ValidateLicense method.

Set the attribute's Name property to Default.

A WebServiceBinding attribute should be applied to the ObtainPoints method.

Set the attribute's Name property to Atlanta.

Answer: C

Explanation: It is possible to associate multiple bindings with a Web Service by means of multiple WebServiceBinding attributes. Each binding can have a set of operations. Since the SoapRpcMethod attribute that is applied to the ValidateLicense method has its binding set to Default, you should add a corresponding WebServiceBinding attribute to the class. The Binding property of the SoapRpcMethod attribute must map the Name property of the WebServiceBinding attribute. This will indicate that the ValidateLicense Method, is part of a binding named Default. In the same way you should set the Name property of the second WebServiceBinding attribute to Atlanta.

Incorrect answers:

A: Bindings should be defined at the class or Web service level and thus you should not apply a WebServiceBinding attribute to a Web method because a Web method can only indicate the binding to which it is associated.

B: A Webservice class that does not have a WebServiceBinding attribute applied has a default binding. The name of a default binding is usually the name of the Web service appended to the word "Soap". In this case the default binding is named LicenseServiceSoap. Thus you should not apply a single attribute to the class.

D: You should rather have the WebServiceBinding attribute applied to the class and not to the Web methods.

QUESTION 88

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The implementation of trace listeners forms part of your responsibilities at Certkiller .com. You are currently busy implementing a custom trace that logs errors and warnings in a Microsoft SQL Server 2005 database. The custom trace implementation must allow individual applications to determine whether errors or warnings should be logged at a given time. To this end you install the assembly that contains the trace listener in the global assembly cache (GAC) on an application server.

You need to enable all Web services on the application server to use the trace listener by default. You should ensure that your solution does not force Microsoft Windows Forms applications that run on the server to use the trace listener.

What should you do? (Each correct answer presents part of the solution. Choose

two.)

- A. The trace listener should be added to the Web.config file for each Web service.
- B. The trace listener should be added to the global Web.config file.
- C. The trace listener should be added to the machine.config file.
- D. Specify trace switches for each Web service in the Web.config file.
- E. Specify trace switches in the machine.config file.

Answer: B, D

Explanation: The global Web.config file contains the configuration settings for all the Web applications on a computer. When the trace listener is added to the global Web.config file you will enable all Web services on the application server to use the trace listener by default. You should also specify trace switch settings in the Web.config file for each web service. This in turn will allow you to determine if errors or warnings are logged to the database on a per Web service basis.

Incorrect answers:

A: You should not add the trace listeners to the Web.config file for each Web service. You should enable the trace listener setting by default which can be done by changing the global Web.config file.

C: The trace listener should not be added to the machine.config file. It will cause the Windows Forms to inherit the settings by default because the machine.config file contains configuration settings for all applications on a computer.

E: You should not specify trace switches in the machine.config file. Each Web service must define the switches to control whether errors or warnings are logged for that Web service.

QUESTION 89

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The deployment of Web services forms part of your responsibilities at Certkiller .com.

You are currently busy copying a Microsoft Extensible Markup Language (XML)

Web Service from a development server using the Copy Web Site tool. You then

discover that in the event of users navigating to

http://www. Certkiller .zzz/LocationService.asmx, they encounter an exception message in their browsers as follows:

Request format is unrecognized.

However, the message is not displayed when you test the Web service from a development server. When users navigate to this page, they should be able to view the automatically generated ASP.NET runtime Help page. You now need to ensure that users will be able to view the Help page without interfering with the deployment of other Web services on the production server.

What should you do?

- A. You should add

```
<configuration>
<system.web>
<webServices>
<wsdlHelpGenerator href="#WSDL"/>
</webServices>
</system.web>
</configuration>
```

to the machine.config file on the Web server.

B. You should add

```
<configuration>
<system.web>
<webServices>
<wsdlHelpGenerator href="#WSDL"/>
</webServices>
</system.web>
</configuration>
```

to the Web.config file on the Web server.

C. You should add

```
<configuration>
<system.web>
<webServices>
<protocols>
<add name="Documentation"/>
</protocols>
</webServices>
</system.web>
</configuration>
```

to the Web.config file for the Web service.

D. You should add

```
<configuration>
<system.web>
<webServices>
<protocols>
<add name="Documentation"/>
</protocols>
</webServices>
</system.web>
</configuration>
```

to the machine.config file on the Web server.

Answer: C

Explanation: the Documentation protocol should be added to the collection of protocols supported by ASP.NET Web services. This will allow the ASP.NET runtime to display a Help page when navigating to a Web service in a Web browser. If the Documentation protocol is disabled in either the machine.config file or the Web.config file for a Web

application, the exception message will be displayed. Because this problem occurs on the production Web server and not the development Web server, the machine.config file must be configured to disallow the Documentation protocol.

Incorrect answers:

A: You should not set the WSDL Help generator page by setting the href attribute of the HelpGenerator element. This element allows you to specify a custom Help page rather than the automatically generated one. Furthermore this is the wrong location to be adding this configuration.

B: You should not set the WSDL Help generator page by setting the href attribute of the HelpGenerator element. This element allows you to specify a custom Help page rather than the automatically generated one.

D: The Documentation protocol should not be added in the machine.config file. In such a case it will affect the other Web services that are running on the production web server, especially since the question requires you to disallow the Documentation protocol for all the other Web services.

QUESTION 90

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web service. This XML Web service is intended to allow the traffic department to perform driver license verifications. To this end you created the following Web method:

Exhibit:

```
<WebMethod(>
```

```
Public Sub VerifyLicence(ByVal licenseNumber As String)
```

```
End Sub
```

You need to apply an attribute to the method to specify the parameter style and formatting that is expected from SOAP clients. You should take care that the XML Web Service that you are developing is Web Services Interoperability (WS-1) compliant.

What should you do? (Choose the correct code segment.)

A. <SoapDocumentMethod("urn:gov:DOT", Use:=SoapBindingUse.Encoded, ParameterStyle:=SoapParameterStyle.Bare)> _

B. <SoapDocumentMethod("urn:gov:DOT", Use:=SoapBindingUse.Literal, ParameterStyle:=SoapParameterStyle.Wrapped)> _

C. <SoapRpcMethod("urn:gov:DOT", Use:=SoapBindingUse.Encoded)> _

D. <SoapRpcMethod("urn:gov:DOT", Use:=SoapBindingUse.Literal)> _

Answer: B

Explanation

: To ensure that you comply with the WS-1 standard, you need to make use of document-literal Web methods with wrapped parameter styles. Thus you need to use a SoapDocumentMethod attribute with its Use property set to SoapDocumentUse.Literal and its parameter style property should be set to SoapParameterStyle.Wrapped. Literal in SoapDocumentUse.Literal means that literal formatting should be used. Thus the parameter elements do not need to explicitly specify their types because the elements are included in the definition section of the Web Services Description Language (WSDL) document.

Incorrect answers:

A: The SoapParameterStyle should not be set to Bare as it indicates that parameters can exist as immediate children of the body element in the SOAP request. Furthermore, it does not comply with WS-1 standards.

C: You should not set the Use Property of the SoapDocument method to Encoded because this would indicate that parameter elements must explicitly specify their types. And it does not comply with WS-1 standards.

D: You should not make use of the SoapRpcMethod attribute since the WS-1 standard does not support the RPC style. And RPC always encapsulates parameters as elements within a single body element.

QUESTION 91

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will be accessed by SOAP clients. To this end you need to specify the parameter formatting to result in a Web service that is Web Services Interoperability (WS-1) compliant.

What should you do?

- A. Make use of Remote Procedure Call (RPC)-literal formatting.
- B. Make use of Document-literal formatting.
- C. Make use of Remote Procedure Call (RPC)-encoded formatting.
- D. Make use of Document-encoded formatting.

Answer: B

Explanation: You need to make use of the document-literal Web method with wrapped parameter styles to comply with the WS-1 standard.

Incorrect answers:

A: RPC formatting always encapsulates parameters as elements within a single body element. The WS-1 standard does not support RPC formatting.

C: RPC formatting is not supported in the WS-1 standard, whether it is in literal or encoded form.

D: You should not make use of document-encoded formatting. This indicates that the

parameter elements must explicitly specify their types and it does not comply with the WS-1 standard.

QUESTION 92

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a taxi-cab-for-hire company.

You are currently developing an Extensible Markup Language (XML) Web Service that is meant to allow Certkiller .com to be able to locate the taxis that it provides for its customers. With this Web service application the Certkiller .com Web service clients will send a SOAP request similar to the one that is illustrated in the exhibit.

Exhibit:

```
<soap:envelope>
<soap:body>
<ObtainLocation xmlns="urn:gov:DOT">
<mobilePhoneNumber>000-000-0000</mobilePhoneNumber>
</ObtainLocation>
</soap:body>
</soap:envelope>
```

You have created a Web method named ObtainLocation. You then apply a SoapDocumentMethod attribute to ObtainLocation. Now you need to configure the SoapDocumentMethod attribute so as to enable it to support the SOAP request. What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. The Use property should be set to SoapDocumentUse.Encoded.
- B. The Use property should be set to SoapDocumentUse.Literal.
- C. The ParameterStyle property should be set to SoapParameterStyle.Wrapped.
- D. The ParameterStyle property should be set to SoapParameterStyle.Bare.

Answer: B, C

Explanation: SoapDocumentUse.Literal will indicate that literal formatting should be used. This in turn means that elements do not need to explicitly specify their types because the elements would be included in the definitions section of the Web Services Description Language (WSDL) document.

SoapParameterStyle.Wrapped will indicate that the parameter elements have to exist within a single child element of the body element. In this case the mobilePhoneNumber parameter element does not explicitly define its type. Furthermore the mobilePhoneNumber parameter exists as a child element of ObtainLocation.

Incorrect answers:

- A: The Use property should not be set to SoapDocumentUse.Encoded as this indicates that the parameter elements must explicitly define their types.
- D: The ParameterStyle property should not be set to SoapParameterStyle.Bare as this

indicates that parameters may exist as immediate children of the body element in the SOAP request.

QUESTION 93

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web service. This XML Web service is intended to allow the traffic department to perform driver license verifications. The traffic department will send a SOAP request similar to the one illustrated in the exhibit.

Exhibit:

```
<soap:envelope>
<soap:body>
<state xmlns="urn:gov:DOT">GA</state>
<licenseNumber xmlns+"urn:gov:DOT">111222333</LicenseNumber>
</soap:body>
</soap:envelope>
```

You have created a Web method named VerifyLicence. And now you need to apply an attribute to the VerifyLicence method to enable it to support the SOAP requests which will be sent to it.

What should you do? (Choose the correct code segment.)

- A. <SoapDocumentMethod("urn:gov:DOT", Use:=SoapBindingUse.Encoded, ParameterStyle:=SoapParameterStyle.Wrapped)> _
- B. <SoapDocumentMethod("urn:gov:DOT", Use:=SoapBindingUse.Literal, ParameterStyle:=SoapParameterStyle.Wrapped)> _
- C. <SoapDocumentMethod("urn:gov:DOT", Use:=SoapBindingUse.Literal, ParameterStyle:=SoapParameterStyle.Bare)> _
- D. <SoapDocumentMethod("urn:gov:DOT", Use:=SoapBindingUse.Encoded, ParameterStyle:=SoapParameterStyle.Bare)> _

Answer: C

Explanation: SoapDocumentUse.Literal will indicate that literal formatting should be used. This in turn means that elements do not need to explicitly specify their types because the elements would be included in the definitions section of the Web Services Description Language (WSDL) document.

SoapParameterStyle.Bare will indicate that parameters may exist as immediate children of the body element in the SOAP request. In this case the LicenseNumber parameter element does not explicitly define its type. Furthermore it exists as an immediate child element of the body element.

Incorrect answers:

A:

Both sections in this option are incorrect. The ParameterStyle property should not be set to SoapParameterStyle.Wrapped as this will indicate that the parameter elements have to exist within a single child element of the body element and the Use property should not be set to SoapDocumentUse.Encoded as this indicates that the parameter elements must explicitly define their types.

B: The ParameterStyle property should not be set to SoapParameterStyle.Wrapped as this will indicate that the parameter elements have to exist within a single child element of the body element.

D: The Use property should not be set to SoapDocumentUse.Encoded as this indicates that the parameter elements must explicitly define their types.

QUESTION 94

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com.

You are currently busy developing an Extensible Markup Language (XML) Web service. This XML Web service is intended to allow the traffic department to perform driver license verifications in particular geographic areas. To this end you created the following Extensible Markup Language (XML) Web Service class definition as illustrated in the exhibit.

Exhibit:

```
<WebService(> _
Public Class LicenseService
Inherits WebService
Private _licenceVerifier as LicenseVerifier
<WebMethod(> _
Public Function GetRecentInvalidLicenseHistory() As String()
Dim invalidLicenses As ArrayList = _
CType(MyBase.Application.Item(InvalidLicenses"), ArrayList)
Return CType(invalidLicenses.ToArray(GetType(String)), String())
End Function
<WebMethod(> _
Public Function VerifyLicense(ByVal state As String, ByVal
licenseNumber _
As String) As Boolean
Dim isValid As Boolean = Me._licenseVerifier.Verify(geoArea,
licenseNumber)
If Not isValid Then
Dim invalidLicList As ArrayList = _
Ctype(MyBase.Application.Item("InvalidLicenses"),
ArrayList) invalidLicenses.Add(licenseNumber)
End If
Return isValid
End Function
```

End Class

The VerifyLicence Web method will verify an individual's driver license in a particular geographic area.

The ObtainRecentInvalidLicenseHistory will return a list of all the driver licenses that has been revoked regardless of geographic area.

You are required to modify the two Web methods so as to prevent them from throwing exception of type NulReferenceException.

What should you do?

- A. Create an instance of ArrayList if there is no ArrayList in the Application object.
- B. Store and retrieve the ArrayList instance to and from the Session object.
- C. Serialize and deserialize the items in the ArrayList instance using the XmlSerializer class.
- D. In each Web method create an instance of LicenseVerifier.

Answer: A

Explanation

: The application object holds the state information for the Web service and is thus not client-specific. Also if the Application does not have a certain value for the InvalidLicenses key, a null reference (Nothing) is returned. If you try to access members of a null reference, an exception of type NulReferenceException is thrown. Thus you should create an instance of ArrayList if one does not exist in the Application object.

Incorrect answers:

B: The Session object holds state information for each client that is connected to the Web service. This means that the GetRecentInvalidLicenseHistory method will only return licenses that were rendered invalid by a particular Web service client. This you should not store and retrieve the ArrayList instance to and from the Session object.

C: The XmlSerializer allows one to serialize and deserialize an object to and from XML. The GetRecentInvalidLicenseHistory method returns a String Array which is supported by Web Services Description Language (WSDL). Thus you should not serialize and deserialize the items in the ArrayList instance using the XmlSerializer class

D: A LicenseVerifier instance is created during the construction of the LicenseService class and this construction takes place after the Web method is called due to Web services being inherently stateless. Thus you should not create an instance of LicenseVerifier in each Web method.

QUESTION 95

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a real estate and property management company.

A class named PropertyManagement holds a shared method named ObtainProperties. ObtainProperties is configured to accept a String parameter that

identifies a client and return a DataSet instance that holds all the properties that are managed by that client. The client identifier is a Microsoft Windows Active Directory user name.

You received instruction to create an Extensible Markup Language (XML) Web Service that makes use of Windows Authentication to expose this functionality to the Internet. However, you need to ensure that your solution also enhances the Web server performance. To this end you need to save the property results in memory on the Web server.

What should you do? (Choose the correct code segment.)

A. Public Class PropertyManagementService
<WebMethod(EnableSession:=True)> _
Public Function ObtainProperties() As DataSet
Dim dataset As DataSet = Nothing
dataSet = CType(Session("Properties"), DataSet)
If (dataSet Is Nothing) Then
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name)
Session("Properties") = dataSet
End If
Return dataSet
End Function
End Class

B. Public Class PropertyManagementService
Inherits WebService
<WebMethod(EnableSession:=True)> _
Public Function ObtainProperties() As DataSet
Dim dataset As DataSet = CType(Session("Properties"), DataSet)
If (dataSet Is Nothing) Then
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name)
Session("Properties") = dataSet
End If
Return dataSet
End Function
End Class

C. <WebService()> _
Public Class PropertyManagementService
Inherits WebService
<WebMethod()> _
Public Function ObtainProperties() As DataSet
Dim dataset As DataSet = CType(Application("Properties"), DataSet)
If (dataSet Is Nothing) Then
dataSet = PropertyManagement.ObtainProperties(User.Identity.Name)
Application("Properties") = dataSet
End If
Return dataSet
End Function

```
End Class
D. <WebService()> _
Public Class PropertyManagementService
<WebMethod()> _
Public Function ObtainProperties() As DataSet
Dim dataset As DataSet = Nothing
dataset = CType(Application("Properties"), DataSet)
If (dataset Is Nothing) Then
dataset = PropertyManagement.ObtainProperties(User.Identity.Name)
Application("Properties") = dataset
End If
Return dataset
End Function
End Class
```

Answer: B

Explanation: The Web service class should be derived from the WebService, set the EnableSession property of the WebMethod attribute to true and use the Session object to save and retrieve properties. The session object holds information for each client that is connected to the Web service. This in turn will allow the results to be saved in memory on a per-client-basis. The base WebService class provides access to the Session object and the EnableSession property will indicate that the Web method makes use of the Session object.

Incorrect answers:

A: The Web service class must be derived from the Web service because the WebService class provides access to the Session object.

C: The Application object should not be used to store and retrieve information. This object holds the state information for the Web service and is thus not client specific.

D: The Application object should not be used to store and retrieve information. This object holds the state information for the Web service and is thus not client specific.

QUESTION 96

You work as the Microsoft.NET developer at Certkiller .com. Certkiller .com operates as an agency that specializes in the placement of various breeds of pedigreed animals, servicing at least ten different countries on two continents. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently developing an Extensible Markup Language (XML) Web Service that will return biological images in SOAP messages. Due to the size of these messages, you decided to create a class named CompressionSoapExtension to compress the SOAP responses. You thus need to implement the ProcessMessage method to encrypt the SOAP responses.

What should you do?

- A. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.BeforeDeserialize.
- B. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.BeforeSerialize.
- C. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.AfterDeserialize.
- D. Encrypt the message if the Stage property of the Soapmessage parameter is set to SoapMessageStage.AfterSerialize.

Answer: D

Explanation: You should compress the message if the Stage property of the SoapMessage instance is set to SOapMessageStage.AfterSerialize. The Stage property represents the stage in serialization and deserialization process of a SOAP message. At this stage, the Web method has been invoked and the output parameter and return value have been fully serialized into an XML message. This will allow you to compress the message before it is sent back to the Web service client.

Incorrect answers:

- A: If you set the Stage property of the SoapMessageStage.BeforeDeserialize, then the input parameters to a Web method would not be deserialized into input parameters.
- B: If you set the Stage property of the SoapMessageStage.BeforeSerialize, then the Web method will be invoked, but the output parameters and return value will not have been serialized into an XML message.
- C: If you set the Stage property of the SoapMessageStage.AfterDeserialize, then the input parameters to the Web method will be serialized into input parameters, but the Web method would not yet have been invoked.

QUESTION 97

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as a pharmaceutical company with many branch offices that are located worldwide. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You have just developed and deployed an Extensible Markup Language (XML) Web Service that will allow for the exchange of encrypted SOAP messages between the different Certkiller .com branch offices. The assembly that contains the Web service also contains a SOAP extension class named EncryptionExtension that encrypts the SOAP messages. Due to the size of some of the messages, you implemented a second SOAP extension class named CompressionExtension that compresses SOAP messages. This class exists in the SoapUtilities namespace in an assembly named SoapUtilities.dll

You must modify the Web.config file for the Web service to ensure that compression occurs after encryption.

What should you do? (Choose the correct configuration from the given options.)

A. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="0"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

B. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

C. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="2"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

Answer: C

Explanation: You can either apply a SoapExtension-derived attribute to a Web method or specify the SOAP extension in the Web.config file when configuring a Web service to use SOAP extensions. When specified in the Web.config file, the extension is executed for all Web methods defined for the Web service. The execution processing order of SOAP extensions are:

1. All SOAP extensions that are members of group 0 are executed.
2. All SOAP extensions that are specified declaratively as attributes are executed.
3. All SOAP extensions that are members of group 1 are executed.

Incorrect answers:

A, B, C: You should not set the group number to 0 as it will result in compression to occur before encryption.

QUESTION 98

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

Certkiller .com operates as a pharmaceutical company with many branch offices that are located worldwide.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You have just developed and deployed an Extensible Markup Language (XML) Web Service that will allow other companies to submit encrypted SOAP messages to Certkiller .com. The assembly that contains the Web service also contains a SOAP extension class named EncryptionExtension that decrypts the SOAP messages that represents the medical records. Due to the size of some of the messages, you implemented a second SOAP extension class named CompressionExtension that decompresses compressed SOAP messages. This class exists in the SoapUtilities namespace in an assembly named SoapUtilities.dll

You must modify the Web.config file for the Web service to ensure that decompression occurs before decryption.

What should you do? (Choose the correct configuration from the given options.)

A. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="0"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
B. <configuration>


```
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
C. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="1"
Group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
Priority="2"
Group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
```

Answer: C

Explanation: You can either apply a SoapExtension-derived attribute to a Web method or specify the SOAP extension in the Web.config file when configuring a Web service to use SOAP extensions. When specified in the Web.config file, the extension is executed for all Web methods defined for the Web service. The execution processing order of SOAP extensions are:

- (1) All SOAP extensions that are members of group 0 are executed.
- (2) All SOAP extensions that are specified declaratively as attributes are executed.
- (3) All SOAP extensions that are members of group 1 are executed.

Incorrect answers:

A, B, C: You should not set the group number to 1 as it will result in decompression to occur after decryption.

QUESTION 99

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as a financial information services provider to a number of financial institutions, i.e. banks.

You are currently developing an application that will allow interaction with the financial institutions. All these banks expose a Web service that conforms to a standard Web Services Description Language (WSDL) document. However there are some of these banks that do not support a SOAP head that will allow Certkiller .com to pass transaction information to the Web services.

To this end you make use of Microsoft Visual Studio 2005 to generate a Web proxy service named FinancialService. The exhibit below illustrates the class that also gets generated.

Exhibit:

Public Class Transaction

Inherits SoapHeader

Public TransactionID As Integer

Public TransactionState As String

End Class

You then proceed to write the following code so as to initiate the proxy class:

```
01 Dim financialServiceProxy as FinancialService = NewFinancialService()
```

```
02 financialServiceProxy.TransactionValue = New Transaction ()
```

```
03 financialService Proxy.TransactionValue.TransactionID = 1000
```

```
04 financialService Proxy.TransactionValue.MustUnderstand = True
```

However, after you have written this code you discover that the financial institutions that do support SOAP heads; throw exceptions of type

SoapHeaderException when the Web methods are invoked. You thus need to modify the code to prevent these exceptions from being thrown.

What should you do? (Choose the line number that represents the code statement that should be modified.)

A. 01

B. 02

C. 03

D. 04

Answer: D

Explanation: Line 04 should be changed. More specifically the MustUnderstand property of the Transaction class should be changed to false. When set to true, the Web method is invoked must understand the header represented by that class. Else the Web method throws an exception of SoapHeaderException. Because not all the financial institutions support SOAP headers, you should not force the Web services to understand the header.

Incorrect answers:

A, B, C: None of these line statements will cause an exception of type SoapHeaderException to be thrown.

QUESTION 100

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The creation, configuration and deployment of Remoting applications form part of your responsibilities at Certkiller .com.

A class named ObjectManager is defined in the ManagementServer namespace in an executable named ManagementServer.exe. The ObjectManager class is derived from MarshalByRefObject. You then create a client application named Client.exe. Client.exe does not have a reference to ManagerServer.exe. You need to keep in mind that there are a few technical requirements. These are:

1. The client application must execute with restricted permissions.
2. The ObjectManager must execute with unrestricted permissions.

You now need to create an instance of ObjectManager in the client application. What should you do? (Choose the correct code segment.)

A. Dim remoteAssembly As Assembly =
Assembly.LoadFrom("ManagementServer.exe")
Dim level As PolicyLevel = PolicyLevel.CreateAppDomainLevel()
Dim permissionSet As PermissionSet = New
PermissionSet(PemissionState.Unrestricted)
level.RootCodeGroup.PolicyStatement = New PolicyStatement(permissionSet)
AppDomain.CurrentDomain.SetAppDomainPolicy(level)
Dim instance As Object =
remoteAssembly.CreateInstance("ManagementServer.ObjectManager")

B. Dim level As PolicyLevel = PolicyLevel.CreateAppDomainLevel()
Dim permissionSet As PermissionSet = New
PermissionSet(PermissionState.Unrestricted)
level.RootCodeGroup.PolicyStatement = New PolicyStatement(permissionSet)
AppDomain.CurrentDomain.SetAppDomainPolicy(level)
Dim handle As ObjectHandle = _
AppDomain.CurrentDomain.CreateInstanceFrom("ManagementServer.exe", _
"ManagementServer.ObjectManager")

C. Dim remoteDomain As AppDomain =
AppDomain.CreateDomain("RemoteComponents")
remoteDomain.ExeciteAssembly("ManagementServer.exe")
Dim level As PolicyLevel = PolicyLevel.CreateAppDomainLevel()
Dim permissionSet As PermissionSet = New
PermissionSet(PemissionState.Unrestricted)
level.RootCodeGroup.PolicyStatement = New PolicyStatement(permissionSet)
remoteDomain.SetAppDomainPolicy(level)
Dim handle As ObjectHandle =

```
remoteDomain.CreateInstanceFrom("ManagementServer.exe", _  
"ManagementServer.ObjectManager")  
D. Dim level As PolicyLevel = PolicyLevel.CreateAppdomainLevel()  
Dim permissionSet As PermissionSet = New  
PermissionSet(PermissionState.Unrestricted)  
level.RootCodeGroup.PolicyStatement = New PolicyStatement(permissionSet)  
AppDomain.CurrentDomain.SetAppDomainPolicy(level)  
Dim objectManager As ManagementServer.ObjectManager = _  
New ManagementServer.ObjectManager()
```

Answer: C

Explanation: ObjectManager should be created in a separate application domain because then it will allow unrestricted permissions to ObjectManager while still allowing the application to continue to run with restricted permissions. To create the application domain, you must call the CreateDomain method of the AppDomain class. ManagementServer.exe should then be loaded into the application domain by means of calling the ExecuteAssembly method of the AppDomain class. Then the security policy for the application domain should be set. Then you should create an instance of ObjectManager from the application domain by calling the CreateInstanceFrom method of the AppDomain class.

Incorrect answers:

A: The LoadFrom method loads an assembly into the current application domain, but due to the client application having a different requirement from the ObjectManager, you should load the ObjectManager into a different application domain. This means that you should not call the LoadFrom method of the Assembly class.

B: The CreateInstanceFrom method of the current AppDomain instance should not be called. It will then load an instance of ObjectManager into the current application domain. But because the client application has different requirement to that of ObjectManager, you should rather load ObjectManager into a different application domain.

D: The client application does not have a reference to ManagementServer.exe and thus you should not instantiate ObjectManager by calling its constructor. If you do it will load an ObjectManager instance into an application domain based on whether its configured to make use of Microsoft.Net Remoting or not.

QUESTION 101

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development of applications forms part of your responsibilities at Certkiller .com.

You are currently developing an application that monitors a network for changes.

The application itself consists of a Microsoft ASP.NET Web application and a Microsoft .NET Remoting server component. Both of these exist on the same server but run in different processes. Policies and rules for monitoring the network are stored in a Microsoft SQL Server 2005 database. The server component contains a

class named Monitor. This class contains a method named GetChanges that returns a DataSet instance. Changes to the network are represented by DataSet. When initiated the Monitor class will retrieve all policies and rules from the database. You need to code the host application for the remote component to register the Monitor class for .NET Remoting. However, you do not want the remote component to query the database each time the GetChanges method is called. This means that you should configure a certain code segment. What should you do? (Choose the correct code segment.)

- A. Dim channel As TcpClientChannel = New TcpClientChannel()
ChannelServices.RegisterChannel(channel, False)
RemotingConfiguration.RegisterWellKnownServiceType(Get Type(Monitor),
"Monitor.rem", WellKnownObjectMode.SingleCall)
- B. Dim channel As IpcServerChannel = New IpcServerChannel("MonitorHost")
ChannelServices.RegisterChannel(channel, False)
RemotingConfiguration.RegisterWellKnownService Type(Get Type(Monitor),
"Monitor.rem", WellKnownObjectMode.Singleton)
- C. Dim channel As IpcServerChannel = New IpcServerChannel("Monitor")
ChannelServices.RegisterChannel(channel, False)
RemotingConfiguration.RegisterWellKnownServiceType(Get Type(Monitor),
"Monitor.rem", WellKnownObjectMode.SingleCall)
- D. Dim channel As TcpClientChannel = New TcpClientChannel()
ChannelServices.RegisterChannel(channel, False)
RemotingConfiguration.RegisterWellKnownServiceType(Get Type(Monitor),
"Monitor.rem", WellknownObjectMode.Singleton)

Answer: B

Explanation: The IPC channel allows an application to communicate with a remote object in a different application domain running the same process or in a different process on the same computer.

You should also use the Monitor class as a singleton object by calling the RegisterWellKnownServiceType method of the RemotingConfiguration class and specifying WellKnownObjectMode.Singleton. Singleton objects has a lifespan that is determined by the .NET Remoting Lease Manager. When initiated, a Singleton object releases its memory until its lease expires. Thus the constructor will not be called with every remote method invocation. This is because the Monitor class queries the database in the constructor and the Singleton method ensures that the class does not query the database with every call to GetChanges.

Incorrect answers:

A: Though you can, you should not register a TcpClientChannel instance. IPC is preferred when using the same computer for intercommunication. If using TCP, you must register a TcpServerChannel instance. And then you would need to register a TcpClientChannel instance in the client application.

C: The Monitor class should not be registered as a single-call object. These objects have a lifetime of a single method call and thus their constructors are called with every method

that is invoked, which in turn would cause each invocation to GetChanges to query the database.

D: IPC is preferred over TCP in this case and you should rather be making use of the singleton object.

QUESTION 102

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are currently developing a Microsoft.NET Remoting component that will be accessed over the Certkiller .com local area network (LAN). To this end you create a console application named RemoteHost.exe to serve remote calls to the component. You added Remoting configuration settings in the app.config file of the console application's project. Now you need to configure the host application to use those configuration settings that has been added in the app.config file.

What should you do? (Choose the appropriate code segment.)

- A. `RemotingConfiguration.Configure["bin\Release\app.config",false];`
- B. `RemotingConfiguration.Configure["app.config",false];`
- C. `RemotingConfiguration.Configure["bin\Debug\RemoteHost.exe.config", false];`
- D. `RemotingConfiguration.Configure["RemoteHost.exe.config",false];`

Answer: D

Explanation: When passing the "RemoteHost.exe.config" to the configure method of the RemotingConfiguration class, then the app.config file is copied to the runtime directory and renamed to the executable file with ".config" affixed after you compile a console application.

Incorrect answers:

A: You should not pass "bin\Release\app.config" to the Configure method because this is a project file and not a runtime file.

B: You should not pass "app.config" to the Configure method because this is a project file and not a runtime file.

C: You should not pass "bin\Debug\RemoteHost.exe.config" to the configure method because the RemoteHost.exe.config file exists in the same folder as RemoteHost.exe. This means that you should only be passing the configuration file to the method.

QUESTION 103

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The creation, configuration and deployment of Remoting applications form part of your responsibilities at Certkiller .com.

You are currently developing a Microsoft.NET Remoting component that will allow

all Certkiller .com employees to send messages and receive messages to each other. To this end you implement the message functionality in an assembly named Messenger.dll. Messenger.dll contains the remotable types. You further implement a host application to host the remotable types and a client application that will provide the user interface.

The Messenger.dll assembly must be private to the application and thus you use both client and server configuration files to configure .NET Remoting. Keep in mind that you are not using any custom .NET Remoting extensions, i.e. custom formatters or custom channels. You thus need to configure the application so that you can use strongly-typed instances of the remotable types in the client application.

What should you do?

- A. You should install the Messenger.dll assembly as a private component into the COM+ catalog.
- B. You should install the Messenger.dll assembly into the global assembly cache (GAC).
- C. You should add a reference to the Messenger.dll assembly in the client application.
- D. You should add a reference to the Messenger.dll assembly in the remote host application.

Answer: C

Explanation: This option will allow you to access the types in a strongly-typed manner. Even when instances of these types will be proxy instances at run time, the instances will be marshaled between the client and remote host applications.

Incorrect answers:

A: This option will allow the other COM+ components in the same COM+ application to access the component. Furthermore it will also require the types defined in the Messenger.dll assembly to be hosted by the COM+ hosting process, and in this case the types are hosted by a custom remote host application.

B: The assembly should not be installed in the GAC because the GAC allows for the sharing of assemblies. One requirement is to have the Messenger.dll assembly private to the application.

D: The reference to the Messenger.dll assembly should not be added in the remote host assembly. This will make allowance for using strongly typed instances within the remote host application and not the client application.

QUESTION 104

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are currently developing an application that monitors a network for changes.

This application consists of a Microsoft Windows Forms client and a Microsoft .NET Remoting server component. An assembly named ScanEngine.dll hosts the server component. The following exhibit illustrates that server configuration:


```
<configuration>
<system.runtime.remoting>
<application name="Monitor.rem">
<service>
<activated type="ScanEngine.Monitor, ScanEngine" />
<service>
<channels>
<channel ref="tcp" port="9001" />
<channels>
<application>
<system.runtime.remoting>
<configuration>
```

The following exhibit illustrates the client configuration.

```
<configuration>
<system.runtime.remoting>
<application>
<client url="tcp://appserver:9001/Monitor.rem">
<activated type="ScanEngine.Monitor, ScanEngine" />
<client>
<channels>
<channel ref="tcp">
<channels>
<application>
<system.runtime.remoting>
<configuration>
```

Following is the procedure that you followed:

1. Add a reference to the ScanEngine assembly to the client application.
2. Register the .NET Remoting configurations by using the RemotingConfiguration class.

You now need to create an instance of the Monitor class that will enable you to call its methods remotely.

What should you do?

A. Use the following code segment:

```
Dim monitor As Monitor = New Monitor()
```

B. Use the following code segment:

```
Dim monitor As Monitor = CType(Activator.GetObject(GetType(Monitor),
"tcp://appserver:9001/Monitor.rem"), Monitor)
```

C. Use the following code segment:

```
Dim monitor As Monitor =
CType(AppDomain.CurrentDomain.CreateObjRef(GetType(Monitor)), Monitor)
```

D. Use the following code segment:

```
Dim monitor As Monitor =
CType(AppDomain.CurrentDomain.CreateInstance("ScanEngine", "ScanEngine.Monitor"),
Monitor)
```

Answer: A

Explanation: When one registers the client configuration using the RemotingConfiguration class, then the common language runtime (CLR) knows that a proxy should be created for the construction of any types that are specified in the configuration. Because the Monitor class is specified in the client configuration, the CLR creates a proxy that is identical to the Monitor class. The .NET Remoting infrastructure then initiates the Monitor class on the servers and passes either an object reference or a serialized copy of the Monitor instance back to the client. Thus you should simply use the new operator to instantiate the Monitor class.

Incorrect answers:

B: Calling the GetObject method of the Activator class will result in the retrieval of object references for server-activated objects and not client-activated objects.

C: Calling the CreateObjRef method of the AppDomain class to create instances of remote objects is possible, but you cannot cast the type of the value returned from the method to Monitor. In this case the type of value returned from CreateObjRef is ObjRef. You must call the GetRealObject method of ObjRef to get an instance of the real object.

D: Calling the CreateInstance method of the AppDomain class to create instances of remote objects is possible, but you cannot cast the type of value returned from the method to Monitor. In this case the value returned from CreateInstance is ObjectHandle. You should rather call the Unwrap method of ObjectHandle to get an instance of the real object.

QUESTION 105

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

Another developer named Clive Wilson developed a Microsoft .NET Remoting component. You need to access this component from a Microsoft Windows Forms client application named Client.exe. You thus add the configuration settings provided to you by Clive Wilson to the app.config file of the client application's project. Now you need to configure the client application to use the configuration settings in app.config.

What should you do?

A. Use the following code segment:

```
RemotingConfiguration.Configure(@"obj\Debug\app.config", False)
```

B. Use the following code segment:

```
RemotingConfiguration.Configure(@"bin\Debug\Client.exe.config", False)
```

C. Use the following code segment:

```
RemotingConfiguration.Configure("app.config", False)
```

D. Use the following code segment:

```
RemotingConfiguration.Configure("Client.exe.config", False)
```

Answer: D

Explanation: After you compile a Windows Forms application, the app.config file is copied to the runtime directory and renamed to the executable file with .config affixed. Thus you pass "Client.exe.config" to the Configure method of the RemotingConfiguration class.

Incorrect answers:

A: You should not pass "obj\Debug\app.config" to the Configure method as the app.config file is a project file and not a runtime file.

B: Passing "bin\Debug\Client.exe.config" to the Configure method should not be done because the Client.exe.config file exists in the same folder as Client.exe which means that you should rather pass the configuration file name only to the method.

C: Passing the app.config" to the Configure method is incorrect because this is a project file and not a runtime file.

QUESTION 106

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You have just completed developing and deploying a Microsoft.NET Remoting component to a server computer.

Microsoft Internet Information Services (IIS) 6.0 is hosting the component. The component runs in an application pool that is configured with the default identity. You received instruction to debug the remote component. You want to do so from your development computer.

What should you do?

A. Ensure that you have administrative privileges on the server computer.

Then attach the debugger to the generic service host process [scvhost.exe] on the server computer.

B. Ensure that you have membership of only the Debugger Users group on the server computer.

Then attach the debugger to the ASP.NET Worker Process [w3wp.exe] on the server computer.

C. Ensure that you have administrative privileges on the server computer.

Then attach the debugger to the ASP.NET Worker Process [w3wp.exe] on the server computer.

D. Ensure that you have administrative privileges on the server computer.

Then attach the debugger to the COM+ hosting process [dllhost.exe] on the server computer.

Answer: C

Explanation: You will need administrative privileges on the server computer since only users with administrative privileges can debug remote processes when the process runs

under the Network Service account. Since the remote component is hosted by IIS, it means that it is hosted by the w3wp.exe process. And this process runs each application pool under the Network Service Account by default.

The w3wp.exe process is the ASP.NET process used to host ASP.NET Web applications, -Web services and .NET Remoting components that are hosted by IIS. Thus the debugger should be attached to the ASP.NET Worker Process [w3wp.exe] on the server computer.

Incorrect answers:

A: The svchost.exe process is used to host Microsoft Windows services that are implemented in DLLs. This should not be attached to the debugger.

B: Members of the debugger Users group on the server computer with non-administrative privileges can debug remote processes only if the processes do not run under the Network Service account. This is not the case in this question.

D: You should not attach the debugger to the dllhost.exe process as this process is used to host COM+ server applications.

QUESTION 107

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The creation, configuration and deployment of Remoting applications form part of your responsibilities at Certkiller .com.

You have just completed developing a Microsoft.NET Remoting component that will be used by applications within Certkiller .com. Microsoft Internet Information Services (IIS) 6.0 will be hosting the component. You need to specify a channel and formatter to use so that successful communication can take place between the applications and the remote component.

What should you do?

- A. Make use of a Transmission Control Protocol (TCP) channel with a SOAP formatter.
- B. Make use of a Hypertext Transfer Protocol (HTTP) channel with a SOAP formatter.
- C. Make use of an Inter-process Communication (IPC) channel with a binary formatter.
- D. Make use of a Transmission Control Protocol (TCP) channel with a binary formatter.

Answer: B

Explanation: Because IIS is supported by the HTTP channel you should make use of an HTTP channel with a SOAP formatter.

Incorrect answers:

A: Making use of a TCP channel with a SOAP formatter will not work since only a HTTP channel can support IIS.

C: Making use of an IPC channel with a binary formatter will not work since only a HTTP channel can support IIS.

D: Making use of a TCP channel with a binary formatter will not work since only a HTTP channel can support IIS.

QUESTION 108

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

Another Certkiller .com developer named Rory Allen developed a Microsoft .NET Remoting component. This .NET Remoting component is hosted in Microsoft Internet Information Services (IIS) over port 80. The types in the component are configured to use binary serialization and deserialization. You need to programmatically register an HTTP channel in a client application that accesses the remote types.

What should you do?

A. Use the following code segment:

```
Dim provider As BinaryClientFormatterSinkProvider = New  
BinaryClientFormatterSinkProvider() Dim channel As HttpClientChannel = New  
HttpClientChannel("http", provider)
```

B. Use the following code segment:

```
Dim provider As BinaryServerFormatterSinkProvider = New  
BinaryServerFormatterSinkProvider() Dim channel As HttpServerChannel = New  
HttpServerChannel("http", 80, provider)
```

C. Use the following code segment:

```
Dim provider As BinaryServerFormatterSinkProvider = New  
BinaryServerFormatterSinkProvider() Dim channel As HttpServerChannel = New  
HttpServerChannel("http", 80, provider)
```

D. Use the following code segment:

```
Dim provider As BinaryClientFormatterSinkProvider = New  
BinaryClientFormatterSinkProvider() Dim properties As IDictionary = New Hashtable()  
properties.Add("provider", provider)  
Dim channel As HttpClientChannel = New HttpClientChannel()
```

Answer: A

Explanation: A sink is akin to a point in a communication chain where something specific happens. I.e. it formats a message at a specific point in a communication chain. A sink provider is responsible for creating the sink. You should then create an instance of HttpClientChannel and pass the BinaryClientFormatterSinkProvider instance as a parameter. This creates an HTTP client channel that uses a binary formatter to serialize messages.

Incorrect answers:

B: You should not create an instance of HttpServerChannel as it will result in an HTTP server channel to be created. In this particular case you need to create an HTTP client channel.

C: You need to specify the BinaryClientFormatterSinkProvider instance as a parameter to the HttpClienwntChannel constructor otherwise the HTTP client channel will make use

of the default formatter which is a SOAP formatter.

D: Creating an instance of BinaryServerFormatterSinkProvider is incorrect. This class represents a sink provider that uses a binary formatter to deserialize messages to the remote server that are sent from a client application. In this case you must create a binary formatter that the client application can use.

QUESTION 109

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

You are currently developing a Microsoft.NET Remoting component that will be used to accept connections over a binary inter-process communication (IPC) channel. You make use of a configuration file to configure the remote host application for .NET Remoting. The component works as expected when you test the component from a client application after you have done the configuration. You then implement an event to notify client implications about any changes to the state of the component. The delegate that declares the event specifies an EventArgs-derived class named StateChangeEventArgs as its second parameter. This now results in a SecurityException instance being invoked when a client application attempts to attach a delegate to the event. This SecurityException instance is thrown with the following message:

Type System.DelegateSerializationHolder and the types derived from it (such as SystemDelegateSerializationHolder) are not permitted to be serialized at this security level.

You need to prevent this exception from being thrown.

What should you do?

A. Code access security to demand full trust permissions immediately before the configuration of the remote host application to accept remote connections should be used.

B. <serverProviders>

<Formatter ref="binary" typeFilterLevel="Full"/>

</serverProviders>

should be added to the channel element in the server configuration file.

C. The remote component should be hosted in Internet Information Services (IIS) 6.0 without changing the channel or the formatter.

Then configure a virtual directory to make use of integrated Windows authentication only.

D. The StateChangeEventArgs class should be derived from MarshalByRefObject.

Then apply the Serializable attribute to the StateChangeEventArgs class.

Answer: B

Explanation

: you need to configure the binary formatter for full serialization. .NET Remoting makes

use of low serialization be default. This results in the fact that only basic common language runtime (CLR) types are deserialized. For the full deserialization of delegates you should configure the binary formatter by setting the typeFilterLevel attribute of the formatter element to Full.

Incorrect answers:

A: The remote host application should not be configured to demand full trust permissions as it will not allow the remote component to deserialize delegates.

C: The IIS should not host the remote component. IIS only supports HTTP channels and in this case you are using IPC.

D: The StateChangeEventArgs class should not be derived from MarshalByRefObject. Instances of marshal-by-reference types are not transmitted across application domains.

QUESTION 110

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The creation, configuration and deployment of Remoting applications form part of your responsibilities at Certkiller .com.

You are currently developing a client application that will use Microsoft.NET Remoting to access functionality implemented by a remote component. This remote component is exposed through the HyperText Transfer Protocol (HTTP) channel.

Furthermore the remote component will make use of the default formatter to serialize and deserialize data.

You now need to configure the client application in such a way so as to enable it to serialize data in a form that is expected by the remote component. You may not use custom channels and formatters.

What should you do? (Choose the correct configuration.)

A. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="soap">
<clientProviders>
<formatter ref="http"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
B. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="http">


```
<clientProviders>
<formatter ref="binary"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
C. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="http">
<clientProviders>
<formatter ref="soap"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
D. <configuration>
<system.runtime.remoting>
<application>
<channels>
<channel ref="binary">
<clientProviders>
<formatter ref="http"/>
</clientProviders>
</channel>
</channels>
</application>
</system.runtime.remoting>
</configuration>
```

Answer: C

Explanation: The channel element's ref attribute should be set to http, and the formatter element's ref attribute to soap, because the channel element specifies the channel through which the application will communicate with the remote component. The only available channels are HTTP, IPC and TCP. The formatter element specifies the serialization formatter responsible for the serialization and deserialization of data that passes through the channel. The only available formatters are SOAP and Binary. The HTTP channel used the SOAP formatter whereas the TCP and IPC channels use the binary formatter by default.

Incorrect answers:

A: The channel element ref cannot be set to SOAP because SOAP is not a channel. If you do this then you will need to implement a custom HTTP channel and specify Soap as its name. However, it is stated in the question that you may not make use of custom channels or custom formatters.

B: You should not set the formatter ref attribute to binary because the default formatter for HTTP channel is SOAP and in this case the remote component makes use of the default formatter for HTTP.

D: The channel element ref cannot be set to binary since binary is not a channel. If you do this then you will need to implement a custom HTTP channel and you may not make use of a custom channel or formatter. Furthermore, HTTP is not a formatter and if you do this then again it will require a custom SOAP formatter.

QUESTION 111

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

You are currently developing a Microsoft .NET Remoting component. A class named TransactionManager is configured to be accessed as a Singleton object through Microsoft .NET Remoting. This class does not control its own lifetime since it derives from MarshalByRefObject. You create an instance of this class named transactionManager in a client application. Now you need to renew the lease of transactionManager for 20 minutes when it expires.

What should you do?

A. Use the following code segment:

```
Dim lease As ILease = CType(AppDomain.CurrentDomain.InitializeLifetimeService(),  
ILease)  
lease.RenewOnCallTime = TimeSpan.FromMinutes(20)
```

B. Use the following code segment:

```
Dim lease As ILease = CType(transactionManager.InitializeLifetimeService(), ILease)  
lease.RenewOnCallTime = TimeSpan.FromMinutes(20)
```

C. Use the following code segment:

```
Dim lease As ILease = CType(AppDomain.CurrentDomain.GetLifetimeService(),  
ILease)  
lease.Renew(TimeSpan.FromMinutes(20))
```

D. Use the following code segment:

```
Dim lease As ILease = CType(transactionManager.GetLifetimeService(), ILease)  
lease.Renew(TimeSpan.FromMinutes(20))
```

Answer: D

Explanation

: The GetLifeTimeService method is defined in the MarshalByRefObject class. This method returns an object that controls the lifetime for a marshal-by-reference object. By

default this is an instance of `ILease`. In this case the marshal-by-reference object is `transactionManager`. You should call the `Renew` method of `ILease` to renew the lease of `transactionManager` for 20 minutes. This means calling the `GetLifeTimeService` method of `transactionManager`.

Incorrect answers:

A: You should not set the `RenewOnCallTime` property because it will only result in a lease of `transactionManager` to extend for 20 minutes only when a method of `transactionManager` is called. It will not renew the lease if it has already expired.

B: The `RenewOnCallTime` property represents the lease renewal time when a method on a remote object is invoked. This means that you should not set the `RenewOnCallTime` property in this case since it will then only result in a lease of `transactionManager` to extend for 20 minutes only when a method of `transactionManager` is called. It will not renew the lease if it has already expired.

C: You should not call the `GetLifeTimeService` method of the current `AppDomain` instance. This will return an object that controls the lifetime for the `AppDomain` instance and the `AppDomain` instance also derives from `MarshalByRefObject`.

QUESTION 112

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently developing a Microsoft Windows Forms application. This application will access an Extensible Markup Language (XML) Web service. The application calls a web method named `ProduceRecord` asynchronously to render a medical record of a specific patient. The application must perform additional processing while the medical record is being rendered. Once rendering has been completed, you need to display the medical record by using the same thread that you use to perform the additional processing. You need to ensure that you implement the functionality to meet this requirement.

What should you do?

- A. Polling should be implemented.
- B. A semaphore should be implemented.
- C. A callback should be implemented.
- D. Blocking should be implemented.

Answer: A

Explanation: Polling will allow the application itself to perform additional processing until the asynchronous operation completes.

Incorrect answers:

B: A Semaphore will allow you to implement access control to a shared resource and in this case you are not limiting access control.

C: Callbacks are used when an application must allow user interaction while an

asynchronous operation is taking place. Thus you would obtain the results of the method invocation on a thread separate from the one you use to perform additional processing. This is in violation of the requirements.

D: Blocking will halt the current thread until an asynchronous operation completes. This will then prevent the application from performing additional processing while the asynchronous operation is taking place.

QUESTION 113

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently developing a client application. This application will access an Extensible Markup Language (XML) Web service. The application contains a web method named GetReport that executes queries and returns an instance of a class named Report. Following is a description of the procedure that you followed:

1. You generate a proxy for the Web service using Microsoft Visual Studio 2005.
2. You call the GetReport Web method asynchronously.
3. You configure the proxy to raise an event when the asynchronous operation completes.
4. You create an event handler named OnReportReceived that accepts a parameter named sender of type Object and a parameter named args of type GetReportCompletedEventArgs.
5. You associate the event handler with the event.

You now need to access the returned Report instance in the event handler when the asynchronous operation completes.

What should you do?

- A. The GetReportCompletedEventArgs instance should be cast to an instance of Report.
- B. The Result property of the GetReportCompletedEventArgs instance must be accessed.
- C. The UserState property of the GetReportCompletedEventArgs instance must be accessed.
- D. The sender parameter on the OnReportReceived event handler should be cast to an instance of Report.

Answer: B

Explanation

: Visual Studio 2005 Web service proxy generator automatically creates asynchronous methods for any Web methods exposed by a Web service. "Async" is then appended to the name of each Web method to create an associate asynchronous method. Additionally, Visual Studio creates a delegate and an event to support the asynchronous method. The name of the event is the name of the Web method appended with "Completed." This event is raised when the asynchronous method completes. The generator also creates a class that derives from EventArgs to support the delegate. The name of the class is the

name of the event appended with "EventArgs." For asynchronous Web methods to return only a single value, the EventArgs-derived class contains a property named Result whose type is the same as the return value of the event. This then allows you to use strong-typing to access the results of the asynchronous operation. In this particular case because the GetReport Web method returns a Report instance, the value returned from the Result property of the GetReportCompletedEventArgs class is also a Report instance.

Incorrect answers:

A: The GetReportCompletedEventArgs instance should not be cast to an instance of Report. This property contains information regarding the state of the asynchronous operation. You must access its result property to get the return value from the Web method.

C: There is no need to access the UserState property of the GetReportCompletedEventArgs instance. This property will return a user-defined object that represents the state of the asynchronous operation. You cannot use it to access a return value.

D: The sender parameter of the OnReportReceived event handler should not be cast. This parameter identifies the object that raised the event and in this case the object is an instance of the proxy class.

QUESTION 114

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com. You have created a Microsoft.NET Remoting component that will import data into a database. The Microsoft.NET Remoting component seems to work but you had complaints regarding sluggish client-side performance. To this end you need to apply the OneWay attribute to methods in the component so as to improve the client-side performance.

What should you do?

- A. Apply the OneWay attribute to methods that do not have only output parameters.
- B. Apply the OneWay attribute to methods that do not have input parameters.
- C. Apply the OneWay attribute to methods that do not have return values.
- D. Apply the OneWay attribute to methods that are not overloaded.

Answer: C

Explanation: Remote methods marked with the OneWay attribute does not send responses back to the client and as such cannot have return values, reference parameters, or output parameters. Thus to improve client-side performance you should apply the OneWay attribute to the methods that has no return values.

Incorrect answers:

A: Remote methods that are marked with the OneWay attribute cannot have return values, reference- or output parameters. Thus you should not apply the attribute to methods that has only output parameters.

B: Since Remote methods marked with the OneWay attribute do not send responses back to clients, you should not apply the attribute to methods that do not have input parameters.

D: You should not apply the attribute to methods that are not overloaded. There are no additional restrictions on overloaded methods, but because Remote methods marked with the OneWay attribute do not send responses back to the client, they cannot have return values, reference- or output parameters.

QUESTION 115

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You have just completed the development of a Microsoft.NET Remoting component. You now need to call a remote method asynchronously and obtain an IAsyncResult instance as a result. You thus need to perform additional processing while the asynchronous operation is taking place.

What should you do?

- A. You should create a loop and poll on the IAsyncResult.IsCompleted property.
- B. You should create a loop and poll on the IAsyncResult.CompleteSynchronously property.
- C. You should call the WaitAny method of the WaitHandle class, passing to it a WaitHandle array that contains the IAsyncResult.AsyncWaitHandle object.
- D. You should call the WaitAll method of the WaitHandle class, passing to it a WaitHandle array that contains the IAsyncResult.AsyncWaitHandle object.

Answer: A

Explanation: A loop and poll on the IAsyncResult.IsCompleted property will indicate whether the asynchronous operation has completed. This will allow you to perform additional processing during the asynchronous operation.

Incorrect answers:

B: The .CompleteSynchronous property will determine whether an asynchronous operation was actually completed synchronously. If you poll this property, you will be creating an infinite loop for operations that do not complete synchronously.

C: You should not call the WaitAny method of the WaitHandle class because it will block the current thread until at least one asynchronous operation reaches completion. Blocking should not be implemented in this case because you need to perform additional processing while the asynchronous operation is taking place.

D: You should not call the WaitAll method of the WaitHandle class because it blocks the current thread until all asynchronous operations are completed.

QUESTION 116

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently busy creating a client application that calls a remote method. This remote method is defined in a Microsoft .NET Remoting component. Your application makes use of common language runtime (CLR) managed types only. You want the remote methods to be called asynchronously and thus need to configure the client application appropriately. What should you do?

- A. A delegate that matches the signature of the remote method should be created.
- B. A thread pool that allows a maximum of one thread should be created.
- C. The OneWay attribute should be applied to the client-side method that calls the remote method.
- D. The STAThread attribute should be applied to the client-side class that calls the remote method.

Answer: A

Explanation: Instances of delegates contain BeginInvoke and EndInvoke methods that can be used to invoke methods asynchronously. The BeginInvoke method starts a separate thread to invoke the method associated with the delegate. The EndInvoke method ends the asynchronous operation so that you can access any return values, reference parameters, etc. Thus you should create a delegate that matches the signature of the remote method.

Incorrect answers:

- B: To allow a method to execute asynchronously, multiple threads must execute simultaneously and by default, thread pools have a maximum of 25 threads per processor. Thus you should not create a thread pool that allows a maximum of one thread.
- C: The OneWay attribute should not be applied to the client-side method that calls the remote method. OneWay attributes should be applied to remote methods that do not send responses back to the client.
- D: The STAThread attribute should not be applied to the client-side class that calls the remote method. This attribute only applies to applications that interoperate with COM. COM types are unmanaged types. It is mentioned in the question that the application makes use of managed types only.

QUESTION 117

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You are busy developing a Microsoft Windows Form application that will access a Microsoft.NET Remoting component. In the event of a user clicking the Print button on a form, the application must call a

remote method asynchronously to print a batch of invoices. The application you are developing must allow users the ability to perform other tasks while the invoices are being printed. Once all of the invoices have been printed, the application must interrupt the user by displaying a message box, notifying the user of the status of the invoice printing.

You thus need to implement the functionality to meet all these requirements. What should you do?

- A. A callback should be implemented.
- B. A semaphore should be implemented.
- C. Blocking should be implemented.
- D. Polling should be implemented.

Answer: A

Explanation: A callback will allow you to configure a method that can be executed on another thread when the asynchronous operation completes. This will prevent you from having to block the current thread until the asynchronous operation completes, thus allowing the users to ability to perform other tasks with the application.

Incorrect answers:

B: A semaphore will allow you to implement access control to a shared resource and in this case there is no mention of limiting and exercising any access control.

C: Blocking will halt the current thread until an asynchronous operation is completed and would thus prevent users from performing other tasks while the asynchronous operation is taking place.

D: Polling is used when the application itself must perform additional processing until an asynchronous operation is completed. But in this case the users will be performing the additional tasks and not the application itself.

QUESTION 118

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You created a callback method that mathes the AsyncCallback delegate. This callback method is invoked whenever a particular long-running asynchronous operation completes. This asynchronous operation happens as a result of a method in a Microsoft .NET Remoting component that is invoked. You need to implement the callback method to retrieve the return value from the remote method.

What should you do? (Each correct answer presents part of the solution. Choose THREE.)

- A. Cast the IAsyncResult parameter to the callback method to an instance of AsyncResult.
- B. Cast the IAsyncResult parameter to the type of the return value.

- C. Cast the AsyncDelegate property of the AsyncResult instance to the delegate that was used to begin the asynchronous operation.
- D. Cast the AsyncState property of the IAsyncResult parameter to the type of the return value.
- E. Call the EndInvoke method of the delegate instance.

Answer: A, C, E

Explanation: You need to call the EndInvoke method of the fdelegate instance that began the asynchronous operation. To obtain this delegate instance, you must first cast the IAsyncResult parameter to the callback method to an instance of AsyncResult. The AsyncResult class contains an AsyncDelegate property that represents the delegate instance that was used to begin the asynchronous operation. However, since the type of this property is Object, you need to cast the property to the delegate that was used to begin the asynchronous operation.

Incorrect answers:

B: You should not cast the IAsyncResult parameter to the type of the return value because an IAsyncResult instance contains information about the state of an asynchronous operation.

D: You should not cast the AsyncState property of the IAsyncResult parameter to the type of the return value because this property holds the user-defined data, but it does not store an asynchronous operation's results.

QUESTION 119

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com. You are busy developing a Microsoft.NET Remoting component that will allow messages to be sent between client applications. To this end you are creating an event named MessageReceived. Message Received is configured to accept two parameters:

1. An Object instance that represents the object that raised the event.
2. A MessageReceivedEventArgs instance that will contain the data about the message that was sent.

You need to enable the client applications to receive details about a message that was sent. You thus need to code the MessageReceivedEventArgs class accordingly. What should you do?

- A. The MessageReceivedEventArgs class must be derived from the ServicedComponent.
- B. The MessageReceivedEventArgs class must be derived from the MarshalByRefObject.
- C. You should apply the Serializable attribute to the MessageReceivedEventArgs class.
- D. You should apply the NonSerializable attribute to each of the MessageReceivedEventArgs class members.

Answer: C

Explanation

: When you apply the Serializable attribute to the MessageReceivedEventArgs class, it will configure the marshal-by-value type. This type can be created on a remote server, serialized, and then transported across the remote boundaries to a remote client.

Incorrect answers:

A: The MessageReceivedEventArgs class should not be derived from the ServicedComponent as ServicedComponent derives from MarshalByRefObject and as such are executed at the server only.

B: The MessageReceivedEventArgs class should not be derived from the MarshalByRefObject as this will configure the class as a marshal by reference type. And these types are executed at the server only.

D: The NonSerializable attribute should not be applied to each member of the MessageReceivedEventArgs class as this will prevent the message details from being serialized.

QUESTION 120

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently implementing a Microsoft .NET Remoting component that raises an event to send notifications to remote client applications. To this end you create an event sink class to marshal event invocations. You need to allow the client applications to receive notifications when the event gets raised. Each client must be able to handle the event differently.

What should you do?

- A. A single event must be created in the client application.
- B. A single event must be created in the remote component.
- C. Two events must be created: one in the remote component and another in the event sink class.
- D. Two events must be created: one in the remote component and another in the client application.

Answer: C

Explanation:

The event sink class should handle the remote component's event by raising its own event. The client application will then be able to attach a delegate instance to the event sink class' event, which in turn will allow each client application to handle the remote event differently. An event sink class' purpose is to marshal event invocations between application domains. Thus the solution should be create an event in the remote component and create another event in the event sink class.

Incorrect answers:

A: Creating a single event in the client application is incorrect since the remote component is unable to raise events in the client application directly. It can only do so through event sink classes.

B: Creating a single event in the remote component is not the solution. If you do this, then you must implement the event handler functionality in the event sink class. Even then it will not allow each client application to handle the remote event differently.

D: The remote component cannot raise events in the client application directly. It can only do so through event sink classes. Thus creating one event in the remote component and the other event in the client application would be incorrect.

QUESTION 121

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You are busy developing a client application that will access a Microsoft.NET Remoting messenger application. The messenger application will allow messages to be sent between client applications. A remote class named RemoteMessenger exposes a remote event named MessageReceived. This event will be raised in the event of a client application calling the SendMessage method of the RemoteMessenger class.

A client event sink class named MessengerEventSink handles the remote MessageReceived event in an event handler named OnMessageReceived. In the OnMessage Received handler, the MessengerEventSink class raises its own MessageReceived event.

You are required to allow the client application to be notified as well as log messages when messages are sent through the messenger application. You should take care to not modify the RemoteMessenger class or the MessengerEventSink class.

What should you do?

- A. A delegate instance that represents the OnMessageReceived event handler to the MessageReceived event of the RemoteMessenger class should be attached.
- B. A delegate instance that represents the OnMessageReceived event handler to the MessageReceived event of the MessengerEventSink class should be attached.
- C. A delegate instance that represents a method in the client application to the MessageReceived event of the MessengerEventSink class should be attached.
- D. A delegate instance that represents a method in the client application to the MessageReceived event of the RemoteMessenger class should be attached.

Answer: C

Explanation: The delegate instance that is attached to an event that gets raised in a remote class must also be called remotely. However, the direction of the remote call to raise events is from the remote server to the remote client. For this to happen, both the

remote server and the remote client must know about the class that contains the method. This can be done by creating client event sink classes. In this case the client event sink class is the `MessengerEventSink` class. The only purpose of a client event sink class is to allow it to be marshaled from the server to the client to result in the event getting raised at the client. Due to the client event sink class handling the remote event by raising its own `MessageReceived` event you should handle the client event sink's `MessageReceived` event. This will allow you to log messages when the event is raised. And by not coupling the `MessengerEventSink` class' event handler to a specific implementation you will allow client applications to handle the remote event through client-specific implementations.

Incorrect answers:

A: When you attach a delegate instance that represents the `OnMessageReceived` event handler to the `MessageReceived` event of the `RemoteMessenger` class then the event handler will be coupled to a specific implementation and in addition you would then need to modify the `MessengerEventSink` class which will result in you not complying with the requirements.

B: When you attach a delegate instance that represents the `OnMessageReceived` event handler to the `MessageReceived` event of the `MessengerEventSink` class then the event handler will be coupled to a specific implementation and then it would also require you to modify the `MessengerEventSink` class which will result in you not complying with the requirements.

D: When you attach a delegate instance that represents a method in the client application to the `MessageReceived` event of the `RemoteMessenger` class the event that gets raised at the server and its invocation is not automatically marshaled to the client application. It is client event sink classes that allow you to marshal event invocations from a remote server to a remote client.

QUESTION 122

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of asynchronous calls and remoting events form part of your responsibilities at Certkiller .com.

You are currently implementing a Microsoft .NET Remoting component. This component raises events to send notifications to a remote client application. You need to allow the client applications to attach delegates to the events so that the events will get handled in the remote client application.

What should you do?

A. The event handler should be implemented in a marshal-by-value class that exists in the remote client application.

B. The event handler should be implemented in a marshal-by-value class that exists in an assembly common to both the remote client and the remote server.

C. The event handler should be implemented in a marshal-by-reference class that exists in the remote client application.

D. The event handler should be implemented in a marshal-by-reference class that exists in an assembly common to both the remote client and the remote server.

Answer: D

Explanation: The event handler should be implemented in a marshal-by-reference class that exists in an assembly common to both the remote client and the remote server. The delegate instance that is attached to an event that gets raised on a remote class must also be called remotely. However, the direction of the remote call to raise events is from the remote server to the remote client. Thus both the remote server and the client must know about the class that contains the method. This can be done via an event sink class. Therefore you must place the event handler and any associated code in an assembly that can be referenced by both the client application and the server component.

Incorrect answers:

A: Methods that are implemented in the marshal-by-value classes are executed locally. Therefore implementing the event handler in a marshal-by-value class that exists in the remote client application will not work.

B: This option of implementing the event handler in a marshal-by-value class that exists in an assembly common to both the remote client and the remote server is incorrect. When the server raises an event, an instance of the marshal-by-value class would be local to the server which means that the method will be called on the server and the question states pertinently that the event must get raised at the client.

C: You should not implement the event handler in a marshal-by-reference class that exists in the remote client application. To allow the server to raise the event the client implies that the server must know about the event sink class. Therefore the class must be common to both the remote client and the remote server.

QUESTION 123

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently generating a proxy making use of Microsoft Visual Studio 2005 for a Web Services Enhancements (WSE) 3.0-enabled Extensible Markup Language (XML) Web Service in a client application. Unfortunately you did not have the WSE framework installed on your computer at that stage. You thus need to add the custom code to the proxy. At present your application references the following assemblies:

1. System
2. System Configuration
3. System Data System Deployment
4. System Drawing
5. System Web Services
6. System Windows Forms
7. System.Xml

At this stage you install the WSE 3.0 framework on your computer, and in addition you also added the reference to the required WSE 3.0 assemblies to your application. Now you need to make changes to your project to enable you to

dynamically apply WSE 3.0 policies to all outgoing SOAP requests. You must ensure that you do not remove any of the custom code that has already been written. What should you do?

- A. Regenerate the proxy using Visual Studio 2005.
- B. Add a reference to the System.EnterpriseServices assembly.
- C. Modify the proxy class to derive from WebServicesClientProtocol.
- D. Remove the reference to the System.Web.Services assembly.

Answer: C

Explanation: If you modify the proxy class to derive from WebServicesClientProtocol, then all SOAP requests can adhere to the policies without removing any of the custom code that is already written. This class derived from SoapHttpClientProtocol, which is used to send SOAP messages to a Web service. However, this class also includes a method named SetPolicy which allows for the dynamic application of WSE 3.0 policy to a Web service proxy. Once you apply a policy to a proxy, all subsequent SOAP requests will adhere to that policy.

Incorrect answers:

A: A regeneration of the proxy using Visual Studio 2005 will overwrite the custom code that is written in the proxy.

B: A reference added to the System.EnterpriseServices assembly will not work. This assembly contains types that are used with COM+ and does not provide you with the ability to apply WSE 3.0 policies.

D: A reference removed from the System.Web.Services assembly is not the solution. The WebServicesClientProtocol class derives from SoapHttpClientProtocol, which is defined in the System.Web.Services assembly.

QUESTION 124

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com.

You are currently implementing two SOAP extension classes named EncryptionExtension and CompressionExtension respectively. These two classes encrypt and compress outgoing SOAP messages, and exist in the SoapUtilities namespace in an assembly named SoapUtilities.dll.

You are required to modify the Web.config file for an Extensible Markup Language (XML) Web Service to ensure that encryption will occur prior to compression for the SOAP messages that are returned from that service.

What should you do? (Choose the correct configuration.)

- A. <configuration>
<system.web>
<webServices>


```
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="1"
group="1"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="2"
group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
B. <configuration>
<system.web>
v<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="2"
group="0"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="1"
group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
C. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="1"
group="1"/>
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="1"
group="0"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="SoapUtilities.EncryptionExtension,SoapUtilities"
priority="1"
group="0"/>
```

```
<add type="SoapUtilities.CompressionExtension,SoapUtilities"
priority="2"
group="1"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>
```

Answer: D

Explanation: Soap extensions that are defined in the Web.config file are processed as follows:

(1) All SOAP extensions that are members of group 0 are executed

(2) All SOAP extensions that are members of group 1 are executed.

Furthermore, within each group, a SOAP extension that has higher priority (i.e. a number closer to zero) is executed before those with lower priority. This means that you have two choices to make sure that encryption takes place prior to compression:

(1) Make the EncryptionExtension class a member of a lower group than that of the CompressionExtension class.

(2) Give the EncryptionExtension class a higher priority than that of the CompressionExtension class.

Thus you need to assign the EncryptionExtension class the group 0 membership and the CompressionExtension class the group 1 membership i.e. option D.

Incorrect answers:

A: EncryptionExtension class should not have higher group membership than the CompressionExtension class. This will result in compression occurring before encryption.

B: EncryptionExtension class should not have a lower priority number than the CompressionExtension class as it will result in Compression before Encryption.

C: In this option the Priorities assigned to both these classes are the same. This is incorrect.

QUESTION 125

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Extensible Markup Language (XML) Web Services forms part of your responsibilities at Certkiller .com. You are currently installing the Microsoft Web Services Enhancements (WSE) 3.0 framework on your development computer. At present the WSE configuration settings are not enabled on your computer.

You are required to modify the Web.config file for an ASP.NET application to enable it to support WSE configuration settings.

What should you do? (Choose the correct configuration.)

A. <configuration>
<appSettings>

```
<add
key="microsoft.web.services3" value="Microsoft.Web.Services3.Configuration.WebServicesConfiguration,
Microsoft.Web.Services3, Version = 3.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35/>
</appSettings>
</configuration>
B. <configuration>
<appSettings>
<add key="wse" value="Microsoft.web.services3"/>
</appSettings>
<microsoft.web.services3>
</microsoft.web.services3>
</configuration>
C. <configuration>
<configSections>
<section
name="microsoft.web.services3" type="Microsoft.Web.Services3.Configuration.WebServicesConfiguration,
Microsoft.Web.Services3, Version=3.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35"/>
</configSections>
<microsoft.web.services3>
</microsoft.web.services3>
</configuration>
D. <configuration>
<appSettings>
<add key="
microsoft.web.services3" value="Microsoft.Web.Services3.Configuration.WebServicesConfiguration,
Microsoft.Web.Services3, Version=3.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35
</appSettings>
<microsoft.web.services3>
</microsoft.web.services3>
</configuration>
```

Answer: C

Explanation: You need to specify the configuration settings handler in the Web.config file. This will enable ASP.NET to interpret settings that it does not understand by default.

Incorrect answers:

A, B, D: You should not specify the configuration settings section handler in the appSettings element because this element is used to specify application-specific configuration information.

QUESTION 126

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All

servers in the domain run Windows Server 2003.

The implementation of policies for Web applications forms part of your responsibilities. You deployed a Microsoft Web Services Enhancements (WSE) 3.0-enabled Web service application to a production server. Each Web service that is implemented in the application has a Policy attribute applied. This attribute specifies the name of a policy in a policy file. The production server has the Microsoft.NET Framework 2.0 installed, but not Microsoft Visual Studio 2005. You are required to modify the Web service on the production server to use a different set of policies than those that were used during the development. What should you do?

- A. Create a new policy file on the server manually.
Specify the policies to be used in this policy file.
Execute the policies at run time by creating the appropriate SOAP extension.
Specify the SOAP extension in the Web.config file.
- B. The names of all the policies in the existing policy file must be changed.
Modify the policies so that it is applicable in the production environment.
- C. Create a new policy file on the server manually.
Configure the Web.config file to use this policy file.
Specify the policies to be used in this policy file.
- D. The names of all the policies in the existing policy file must be changed.
Execute the policies at run time by creating the appropriate SOAP extension.
Specify the SOAP extension in the Web.config file.

Answer: C

Explanation: A policy file that contains all the applicable policies for the production environment must be created manually and to configure these policies you need to specify this policy file in the Microsoft.web.services3 section of the Web.config file.
Incorrect answers:

- A: Soap extensions should not be created to execute policies. The policies must be executed prior to SOAP extensions because the policies will determine which SOAP extensions get executed.
- B: The names of the policies should not be changed. In this case each policy attribute that is applied to a Web service specifies the name of a policy, thus if you change the names of the policies in the policy file, the policies will cease being applicable to the Web Services.
- D: Soap extensions should not be created to execute policies. The policies must be executed prior to SOAP extensions because the policies will determine which SOAP extensions get executed.

QUESTION 127

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.
The development and deployment of Client applications forms part of your

responsibilities at Certkiller .com. You are currently developing a client application that will retrieve data from two Extensible Markup Language (XML) Web Services.

1. The one Web service requires the use of username/password authentication.

2. The other Web service requires the use of Kerberos authentication.

You make use of the Web Services Enhancements (WSE) 3.0 proxy generation tool (wsewsdl3.exe) to generate the proxies to the two Web services that requires the different authentications. To this end you create a policy file that specifies the authentication requirements. Now you need to ensure that the requirements are enforced when you call each of the Web services.

What should you do? (Each correct answer presents part of the solution. Choose two.)

A. Call the SetPolicy method on each proxy.

B. Apply a policy attribute to the class that contains the proxy instance.

C. Pass the policy file name to this method.

D. Pass the name of the policy to use this method.

E. Pass the name of this policy to this attribute.

Answer: A, D

Explanation: You should call the SetPolicy method on each proxy, passing to it the name of the policy to use wsewsdl3.exe generated Web service classes are derived from WebServicesClientProtocol. This base class defines a SetPolicy method that enables you to programmatically set the policy for the proxy.

Incorrect answers:

B: You should not apply the policy attribute to the class that contains the proxy instance.

C: The policy file name should not be specified as a parameter to the SetPolicy method.

One specifies the name of a policy, not the file that contains the policy.

E: Policy attributes should be applied to either Web Service classes or Web Service proxy classes.

QUESTION 128

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003.

The development and deployment of Client applications forms part of your responsibilities at Certkiller .com. You are currently developing a Microsoft Windows Forms client application that will retrieve data from an Extensible Markup Language (XML) Web Service. This XML Web Services requires Kerberos authentication. To this end you use the Web Services Enhancements (WSE) 3.0 proxy generation tool (wsewsdl3.exe) to generate a proxy to the Web service. You then create a policy file named policies.config. Policies.config specifies the authentication requirements.

You now need to specify the policy file in the app.config file

What should you do? (Choose the correct configuration.)

- A. <configuration>
<appSettings>
<add key="microsoft.web.services3"value="policies.config"/>
</appSettings>
</configuration>
- B. <configuration>
<appSettings>
<add key="wse3"value="policies.config"/>
</appSettings>
</configuration>
- C. <configuration>
<microsoft.web.services3>
<policy fileName="policies.config"/>
</microsoft.web.services3>
</configuration>
- D. <configuration>
<system.web>
<webServices>
<soapExtensionTypes>
<add type="policies.config"/>
</soapExtensionTypes>
</webServices>
</system.web>
</configuration>

Answer: C

Explanation:

A microsoft.web.services3 element should be added to the Web.config file and you should apply the policy element to that element. You should also specify the policies.config file as the value of the filename attribute of the policy element. This will result in the WSE runtime to load the policies that are defined in the policies.config file.

Incorrect answers:

A: The policy file name should not be specified in the appSettings element because the WSE runtime does not use this element.

B: The policy file name should not be specified in the appSettings element. Even though you use this element to specify application-specific configuration information, the WSE runtime does not use this element.

D: The policies.config should not be specified as a SOAP extension type. The WSE runtime does not process the soapExtensionTypes element to load policy files.

QUESTION 129

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at

Certkiller .com.

You developed a Web Services Enhancements (WSE) 3.0-enabled Web service that will be accessed by Web service clients over the Internet. You then move the Web service from a server named Certkiller -SR01 to a server named

Certkiller -SR02. The Web service was hosted by Microsoft Internet Information Services (IIS) 6.0 on Certkiller -SR01. Certkiller -SR02 on the other hand has no Web server software allowed. Both Certkiller -SR01 and Certkiller -SR02 have .NET Framework 2.0 and WSE 3.0 installed.

You now need to modify the Certkiller -SR02 environment to accommodate access to the Web service for the Web service clients. In your solution you must ensure that there is no need for changes by the Web service clients other than specifying a new Web service endpoint.

What should you do?

- A. Host the Web service in a custom application and listen for Web service requests using the SoapReceivers class.
- B. Host the Web service in a COM+ library application and listen for Web service requests using the SoapReceivers class.
- C. Host the Web service in a custom application and listen for Web service requests using the RemotingConfiguration class.
- D. Use Microsoft Visual Studio 2005 Development Web server to host the Web service and listen for Web service requests using the SoapReceivers class.

Answer: A

Explanation: Hosting the Web service in a custom application will allow you to use TCP to provide access to the Web service. Using SoapReceivers class to listen for Web service requests will ensure that whenever a TCP request arrives that matches the endpoint, that the Web service class will be instantiated to service the request.

Incorrect answers:

B: This option is only partly correct. However, you should not host the Web service in a COM+ library application because COM+ library applications run their client applications' processes. And as such they are incapable of supporting remote access.

C: This option is correct except for the part that states that you should make use of the RemotingConfiguration class to listen for Web requests. This would require the Web service clients to make use of Microsoft .NET Remoting which in turn means that client configuration changes will be required. The question pertinently states that your solution you must ensure that there is no need for changes by the Web service clients other than specifying a new Web service endpoint.

D: You should not host the Web service by using the Visual Studio 2005 Development Web server. This Web server accepts requests from local computer only.

QUESTION 130

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web

Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You are currently developing an Extensible Markup Language (XML) Web service. This service must be accessible over Transmission Control Protocol (TCP). The Web service will not return responses to Web service clients. Now you need to implement the appropriate class that represents the Web service. You thus need to decide where to derive the class from.
What should you do?

- A. You should derive the class from SoapClient.
- B. You should derive the class from SoapReceiver.
- C. You should derive the class from SoapSender.
- D. You should derive the class from WebService.

Answer: B

Explanation: Deriving the class from the SoapReceiver will allow you to make use of TCP to provide access to the Web service. SoapReceivers class can be used to listen for Web service requests over TCP. THE Web service client should call the SendOneWay method of the SoapClient class to send a SOAP requests without waiting for a SOAP response.

Incorrect answers:

A: You should not derive the class from SoapClient. This class derives from SoapSender, and it allows you to send SOAP requests and not to receive them. The Web service client should call the SendOneWay method of the SoapClient class to send a SOAP requests without waiting for a SOAP response.

C: You should not derive the class from SoapSender as this class will then only allow you to send SOAP requests and not receive them.

D: The WebService class supports only HypertextTransfer Protocol (HTTP) Web service requests. Consequently you cannot make use of the WebService class in this case.

QUESTION 131

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You are currently developing a Web Services Enhancements (WSE) 3.0 Web service that will be destined to provide geographical mapping services to some governmental departments. You now need to create a Web method named ObtainImage that will accept global positioning system (GPS) coordinates and return an aerial image corresponding to the location. You thus enable Message Transmission Optimization Mechanism (MTOM) for the Web service. Now you need to decide on an appropriate value that should be returned from the Web method that is capable of supporting MTOM.
What should you do?

- A. A Byte array should be returned from the Web method.
- B. A Bitmap instance should be returned from the Web method.
- C. An Image instance should be returned from the Web method.
- D. A BinaryReader instance should be returned from the Web method.

Answer: A

Explanation: Returning a Byte array will be the solution. MTOM works exclusively with Byte arrays. Thus you should convert the image to a Byte array that is returned from the Web method. MTOM allows Web services and Web service clients to transmit large amounts of data as secure binary attachments.

Incorrect answers:

B: Returning a Bitmap instance will not work because MTOM only works with Byte arrays.

C: Returning an Image instance will not work because MTOM only works with Byte arrays.

D: Returning a BinaryReader instance will not work because MTOM only works with Byte arrays.

QUESTION 132

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The implementation of Web Services Enhancements (WSE) 3.0 forms part of your responsibilities at Certkiller .com.

You make use of Microsoft Visual Studio 2005 to create a Microsoft ASP.NET Web application. You enable Web Services Enhancements (WSE) 3.0 for this application. The Web application is destined to listen for SOAP requests over Hypertext Transfer Protocol (HTTP) and forward them to the appropriate Web servers based on the content of the requests. To this end you need to configure the Web application to meet this requirement.

What should you do?

A. A referral cache file should be added to the Web application and then configure the referral cache file with routing instructions that forward SOAP requests to the appropriate Web server.

Reference the referral cache file in the Web.config file of the Web application.

B. A policy file should be added to the Web application and then configure the policy file with custom policies and assertions that redirect SOAP requests to the appropriate Web Server.

Reference the policy file in the Web.config file for the Web application.

C. Create a SoapHttpRequest derived class and register the class as an HTTP handler for the .asmx file extension.

Override the ProcessRequestMethod method to return an instance of the Uri class based on the contents of a SOAP request.

D. Create a SoapReceiver derived class and register the class to listen for HTTP requests. Override the Receive method and set the ContextAddressing.ReplyTo property of the SoapEnvelope instance that represents the request message to the destination that represents the appropriate Web server.

Answer: C

Explanation: Making use of content-based routing to forward the SOAP requests would be the best solution. To effect this solution you will need to first register a SoapHttpRouter-derived class and register it as an HTTP handler for the .asmx file extension. This will allow the application to handle Web service requests. You should then override the ProcessRequestMessage method of the SoapHttpRouter-derived class. This method accepts a SoapEnvelope instance that represents the SOAP message and returns an instance of the Uri class that specifies the URL to which the request should be forwarded. Thus allowing you to examine the SOAP message to determine the Web server to which it should be sent.

Incorrect answers:

A: There is no need to configure routing instructions in a referral cache in this case. Referral cache files allow one to configure static routing. They allow one to route SOAP requests based on a URL. They do not allow one to route SOAP requests based on the contents of SOAP messages.

B: You should not configure custom policies and assertions to redirect SOAP requests. Policies and assertions can be applied to WSE-enabled Web services and Web service proxies. However, in this case the application does not host any Web services. Its purpose is to redirect Web service requests to the appropriate Web servers.

D: There is no need to override the Receive method of a SoapReceiver-derived class and setting the ContextAddressing.ReplyTo property of the SoapEnvelope instance that represents the request message. Though you can make use of the SoapReceiver class to listen for incoming SOAP messages, the ContextAddressing.ReplyTo property of the SoapEnvelope class represents the destination to which responses should be sent. In this case you need to forward request messages.

QUESTION 133

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Certkiller .com operates as an Internet Auctioneer. The development and deployment of Microsoft.NET Remoting components forms part of your responsibilities at Certkiller .com.

You have been instructed to develop an OrderProcessor class that is responsible for charging a customer's credit card, notifying the shipping department of the particular product that must be shipped, as well as updating the product inventory database. A COM+ application will be hosting the OrderProcessor class. To this end you need to create the class definition.

What should you do? (Choose the appropriate code segment.)

A. Public Class OrderProcessor

```
Inherits WebService
End Class
B. Public Class OrderProcessor
Inherits ServicedComponent
End Class
C. Public Class OrderProcessor
Inherits MarshalByRefObject
End Class
D. Public Class OrderProcessor
Inherits MarshalByValueComponent
End Class
```

Answer: B

Explanation: It is stated in the question that a COM+ application is hosting the class and thus the class must derive either directly or indirectly from the ServicedComponent. The ServicedComponent provides the database for all classes that need to make use of COM+ services. The OrderProcessor class should be derived from ServicedComponent.

Incorrect answers:

A: The OrderProcessor class should not be derived from WebService. This class provides a base class for Microsoft ASP.Net Web services which allows you to access Session and application instances directly.

C: The OrderProcessor class should not be derived from MarshalByRefObject because those types are those that cannot be serialized across an application domain and whose methods must execute remotely. ServicedComponent derives directly from MarshalByRefObject.

D: The OrderProcessor class should not be derived from the MarshalByValueComponent. This class represents marshal-by-value types that can be serialized across an application and whose methods can execute locally.

QUESTION 134

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a realtor and property management company. The exhibit below illustrates the currently existing class definition:

Exhibit:

```
Public Class PropertyManager
Inherits ServicedComponent
Public Sub MoveInNewCustomer(ByVal customer As Customer, ByVal unit As
Unit)
End Sub
End Class
```

Client applications call the MoveInNewCustomer method to move a new customer into a unit. You have been instructed to ensure that this process occurs within the

context of a transaction. If a transaction does not already exist when this method is called, a transaction should be created. Only in the event of an exception being thrown; would you want the transaction to abort.

To this end you need to modify the class to meet these requirements.

What should you do? (Choose the correct code segment.)

- A. <Transaction(TransactionOption.RequiresNew)]> _
Public Class PropertyManager
Inherits ServicedComponent
Public Sub MoveInNewCustomer(ByVal customer As Customer, ByVal unit As Unit)
End Sub
End Class
- B. <Transaction(TransactionOption.Required)]> _
Public Class PropertyManager
Inherits ServicedComponent
AutoComplete()> _
Public Sub MoveInNewCustomer(ByVal customer As Customer, ByVal unit As Unit)
End Sub
End Class
- C. <Transaction(TransactionOption.Supported)]> _
Public Class PropertyManager
Inherits ServicedComponent
Public Sub MoveInNewCustomer(ByVal customer As Customer, ByVal unit As Unit)
End Sub
End Class
- D. <Transaction(TransactionOption.RequiresNew)]> _
Public Class PropertyManager
Inherits ServicedComponent
Public Sub MoveInNewCustomer(ByVal customer As Customer, ByVal unit As Unit)
End Sub
End Class

Answer: B

Explanation: You should apply the Transaction attribute to the class and set its parameter to TransactionOption.Required. This will indicate that the method must execute in the context of a COM+ transaction. If the caller of the method is executing within a transaction, then this transaction is used. If not then a new transaction is created. The AutoComplete attribute should also be applied to this method as it will indicate that the method transaction should commit automatically if the method executes and returns without an exception being thrown. If an exception is thrown, the transaction should abort automatically regardless of the applied AutoComplete attribute.

Incorrect answers:

A: The Transaction attribute parameter should not be set to TransactionOption.RequiresNew as this will indicate that the method must execute within the context of a new COM+ transaction.

C: The Transaction attribute parameter should not be set to TransactionOption.Supported as this will indicate that the method must execute only within the caller's transaction. If the caller is not executing within a transaction, then the method will not execute within the context of a transaction.

D: The Transaction attribute parameter should not be set to TransactionOption.RequiresNew as this will indicate that the method must execute within the context of a new COM+ transaction.

QUESTION 135

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You implemented a strong-named managed assembly that makes use of Enterprise Services. The assembly is not registered for use within a COM+ context. And no RunInstaller attributes have been applied to any of the classes in the assembly. You have been instructed to register the assembly with COM+ to accommodate the COM clients.

What should you do?

A. Install the assembly into the COM+ catalog by running the Regsvcs.exe utility. Then install the assembly into the global assembly cache (GAC) by running the Gacutil.exe utility.

B. Install the assembly into the global assembly cache (GAC) by running the GacUtil.exe utility.

Then install the assembly into the COM+ catalog by running the Regsvcs.exe utility.

C. Install the assembly into the COM+ catalog by running the Regsvcs.exe utility. Then install the assembly's configuration in the registry by running the InstallUtil.exe utility.

D. Install the assembly into the global assembly cache (GAC) by running the GacUtil.exe utility.

Then install the assembly's configuration in the registry by running the InstallUtil.exe utility.

Answer: B

Explanation: Managed assemblies that are hosted by COM+ applications must be installed in the GAC before COM+ clients can use them. Then you should run the Regvcs.exe utility as this utility will allow you to install a managed assembly into the COM+ catalog.

Incorrect answers:

A: The Regvcs.exe utility should not be run prior to running the Gacutil.exe utility because you cannot register assemblies with COM+ for use by COM clients if they do not already exist in the GAC.

C: The Regvcs.exe utility should not be run before the InstallUtil.exe utility. You first need to install the assembly into the GAC before running GacUtil.exe.

D: The InstallUtil.exe utility should not be run after you have run the GacUtil.exe utility. The InstallUtil.exe utility executes custom installers that are defined in an assembly. And custom installers are classes that derive from Installer and that have the RunInstaller attribute applied already.

QUESTION 136

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You are creating a class named PropertyManager. PropertyManager will be registered with COM+ services and will be hosted in a COM+ application called PropertyManagement. To this end you need to apply an attribute to the PropertyManager class to ensure that only COM+ components in the PropertyManagement application can instantiate the PropertyManager class. You thus need to select the appropriate code segment to meet the requirements. What should you do?

- A. You should use the <SecureMethod>_code segment.
- B. You should use the <PrivateComponent>_code segment.
- C. You should use the <ComponentAccessControl>_code segment.
- D. You should use the <SecurityRole("PropertyManagement")>_code segment.

Answer: B

Explanation: The PrivateComponent attribute ensures that only COM+ components that are hosted in the same COM+ application can access the class.

Incorrect answers:

- A: The SecureMethod attribute will ensure that callers invoke methods of COM+ components through interfaces only. This is not what is required in this case.
 - C: The ComponentAccessControl attribute will enforce component-level security access checks for a COM+ component. This is not what is required in this case.
 - D: There is no need to apply the SecurityRole attribute to the class because this attribute ensures that the identity of the caller maps to a specific role in the COM+ catalog.
-

QUESTION 137

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You have developed a serviced component that will be used by both managed and unmanaged applications within Certkiller .com. A remote computer will be hosting this serviced component. The serviced component will be accessible through DCOM. The computers that host the client applications have the .NET Framework 2.0 installed. You have received instruction to allow both managed and unmanaged client applications to reference the serviced component.

What should you do?

A. Copy the serviced component to each client computer that must access the serviced component using the XCOPY tool.

A reference to each client computer should be added to the serviced component's assembly.

B. Run the TypeLibrary Importer (Tlbimp.exe) tool against the serviced component assembly.

Copy the output file to the runtime directory of each client application.

A reference should be added to the output of each client application.

C. A proxy for the COM+ application that hosts the component should be exported into a Microsoft Windows Installer (MSI) package using the Component Services tool.

Execute the package on the computers that contain the client applications.

A reference to the generated assembly should be added to each client application.

D. The RunInstaller attribute should be added to each class in the serviced component assembly.

Run the Installer tool (InstallUtil.exe) on each client computer that must assess the serviced component.

A reference to the serviced component's assembly should be added to each client application.

Answer: C

Explanation: A proxy for the COM+ application that hosts the component should be exported into an MSI package. Then you should execute the proxy component into the COM+ catalog on the client computers. This also installs the GAC. Then a reference to this assembly should be added to each client application. This can be done since all the computers have the .NET Framework installed.

Incorrect answers:

A: XCOPY should not be used to copy the serviced component to each client computer as it will not register the component in the COM+ catalog.

B: The Tlbimp.exe generates a managed assembly from a type library, but then unmanaged client applications cannot directly access components in managed assemblies.

D: The Services component's assembly is a managed assembly, therefore you should not add a reference to the serviced component's assembly to each client application. If then you will deny unmanaged client applications from directly referencing it. Also you should not add the RunInstaller attribute to each class in the serviced component's assembly. This attribute will indicate that the Installer tool must execute for the associated class when the assembly is installed, however, then you should apply the RunInstaller attribute to Installer-derived classes.

QUESTION 138

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment

of client applications forms part of your responsibilities at Certkiller .com.

You have received instruction to create an instance of the PropertyManager class from a client application. Following are the circumstances that you need to keep in mind in your attempts to accomplish the task at hand:

1. A class named PropertyManager exists in an assembly named PropertyManagement.dll.
2. The class and component are registered with COM+ services.
- 3.

The COM+ application that hosts this class is configured as a server application. What should you do? (Choose the correct code segment.)

- A. Dim propertyManager As PropertyManager = CType(Activator.GetObject(GetType(PropertyManager),"COM+"),PropertyManager)
- B. Dim propertyManager As PropertyManager = CType(AppDomain.CurrentDomain.CreateInstanceFrom("PropertyManagement.dll","PropertyManagement",PropertyManager),PropertyManager)
- C. Dim propertyManager As PropertyManager = new PropertyManager();
- D. Dim propertyManager As PropertyManager = CType(Activator.CreateInstanceFrom(PropertyManagement.dll,"PropertyManagement.PropertyManager"),PropertyManager)

Answer: C

Explanation: An instance of the PropertyManager class should be created by calling its constructor. Then the Enterprise Services infrastructure will return a proxy instance that your application uses to make calls across application domain boundaries.

Incorrect answers:

A: The GetObject method of the Activator class should not be used to create an instance of the PropertyManager class. This method will require that the remote object be accessible at a specific URL and COM+ services do not allow objects to be accessed by URL's.

B: Albeit possible to call the CreateInstanceFrom method of the AppDomain class, you should not cast this instance to PropertyManager. It will return an instance of ObjectHandle and to obtain the real object you will need to call the Unwrap method of the ObjectHandle instance.

D: Even though it is possible to call the CreateInstanceFrom method of the Activator class, you should not cast this instance to PropertyManager. It will return an instance of ObjectHandle and to obtain the real object you will need to call the Unwrap method of the ObjectHandle instance.

QUESTION 139

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com. You have received instruction to develop an order fulfillment application. This order fulfillment application must send multiple messages to the queue in the case of it receiving an order. After the application sends the messages to the queue, it must

update an inventory database accordingly. In the event of an error occurring for one of the messages while it is busy updating the database, the application must automatically remove all messages that were sent for the current order. In the event of the database update being successful, another application on the same computer must read and process the messages. Only these two applications must be allowed to access the messages.

Now you need to create the message queue manually.

What should you do?

- A. A non-transactional public queue must be created.
- B. A transactional public queue must be created.
- C. A non-transactional private queue must be created.
- D. A transactional private queue must be created.

Answer: D

Explanation: Creating a transactional private queue will allow messages to be rolled back in the event of an error occurring during the database update. In this way, the messages that are sent in the context of the same transaction are either committed or rolled back as a single unit.

Incorrect answers:

A: Since public queues are available to other computers as well, you should not create a non-transactional public queue because only the local computer should have the queue available in this case.

B: This will not fulfill the requirement of these two applications being on the same computer since a public queue will result in availability to other computers as well.

C: A non-transactional private queue will prevent multiple messages from being committed or rolled back as a single unit.

QUESTION 140

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

On a server named Certkiller -SR01 there is a message queue named OrderProcessorQueue which is configured to be available only on Certkiller -SR01. You need to programmatically delete the queue from another computer.

What should you do?

- A. You should use the following code segment:
`MessageQueue.Delete(" Certkiller -SR01\OrderProcessorQueue")`
- B. You should use the following code segment:
`MessageQueue.Delete(".\ Certkiller -SR01\OrderProcessorQueue")`
- C. You should use the following code segment:
`MessageQueue.Delete(" Certkiller -SR01\Private$\OrderProcessorQueue")`

D. You should use the following code segment:

```
MessageQueue.Delete(".\ Certkiller -SR01\Private$\OrderProcessorQueue")
```

Answer: C

Explanation

: Calling the Delete method of the MessageQueue class and passing the full path of the queue as a parameter is the correct procedure to follow. The full path includes the name of the server computer on which it exists, as well as any queue-specific syntax, such as Private\$ for private queues. Because the queue is configured to Certkiller -SR01 only, it is a private queue.

Incorrect answers:

A: Passing the " Certkiller -SR01\OrderProcessorQueue" as a parameter to the Delete method is incorrect since the path does not include the "Private\$" syntax.

B: You should not pass the ".\ Certkiller -SR01\OrderProcessorQueue as a parameter to the Delete method because this path specifies the (.) symbol at the beginning of the name. This symbol actually represents the local computer. In this case the queue exists on a computer that is not the same one from where you are deleting it. Also this path does not include "Private\$" syntax.

D: You should not pass the " Certkiller -SR01\Private\$\OrderProcessorQueue as a parameter to the Delete method. This path specifies the (.) symbol at the beginning of the name when this symbol actually represents the local computer. In this case the queue exists on a computer that is not the same one from where you are deleting it.

QUESTION 141

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You created an instance of the MessageQueue class named queue. You need to read a message from the queue and block the current thread until it is read. However, in the event of 15 seconds elapsing since you begin reading the queue, you want to resume the current thread. In the event of the message being read within the 15 seconds, you want to remove it from the queue. You thus need to write the appropriate code to accomplish this goal.

What should you do?

A. You should use the following code segment:

```
queue.Peek(TimeSpan.FromSeconds(15))
```

B. You should use the following code segment:

```
queue.Receive(TimeSpan.FromSeconds(15))
```

C. You should use the following code segment:

```
queue.BeginPeek(TimeSpan.FromSeconds(15))
```

D. You should use the following code segment:

```
queue.BeginReceive(TimeSpan.FromSeconds(15))
```

Answer: B

Explanation: You should call the Receive method because this method reads the next message from the queue and blocks the current thread until it is read. By passing a TimeSpan instance as a parameter you have control over the amount of time the current thread is allowed to wait until the message becomes available. When this specified time elapses, the current thread resumes. By calling the Receive method, you also cause the message to be deleted from the queue after it is read.

Incorrect answers:

A: Calling the Peek method will simply peek at the next message in the queue without deleting it.

C: Calling the BeginPeek method will result in the method beginning to peek at the next message asynchronously and not blocking the current thread.

D: Calling the BeginReceive method is incorrect. The BeginReceive method begins reading the next message asynchronously and does not block the current thread.

QUESTION 142

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You are currently creating a message queue programmatically. This message queue will be accessed by two applications. Each message represents an instance of a public class named OrderInfo. The OrderInfo class does not derive from ServicedComponent, and it does not implement any interfaces.

You need to ensure that the state of the class is preserved when a message is sent to and received from the message queue. This state of the class would include the values of private members. The message receiving application understands only the basic .NET Framework classes, and the OrderInfo class. To this end you need to specify the formatter that will be used to serialize and deserialize messages.

What should you do?

- A. You need to specify and instance of the custom formatter class.
- B. You need to specify and instance of the ActiveXMessageFormatter.
- C. You need to specify and instance of the BinaryMessageFormatter class.
- D. You need to specify and instance of the XmlMessageFormatter class.

Answer: C

Explanation: The BinaryMessageFormatter class can be used to serialize and deserialize all members of a class, including private members.

Incorrect answers:

A: The custom formatter class should only be used if none of the default formatter classes are acceptable. In this case the receiving application understands only the basic .NET Framework classes and the OrderInfo class. The OrderInfo class cannot be used as the custom formatter because it does not implement the IMessageFormatter interface with is

a requirement when implementing custom formatters.

B: The `ActiveXMessageFormatter` is used to serialize COM and COM+ components. In this case, the class that the message represents does not derive from `ServiceComponents` and only managed classes derived from `ServiceComponents` are also COM+ components.

D: An `XmlMessageFormatter` class cannot be used to serialize and deserialize private members of a class.

QUESTION 143

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The development and deployment of client applications forms part of your responsibilities at Certkiller .com.

You created an instance of the `MessageQueue` class named `queue`. You need to read a message from the queue and block the current thread until it is read. However, if in the event of 15 seconds elapsing since you began reading the queue; you want to resume the current thread. Regardless of whether the message is read you want it to remain in the queue. You thus need to write the appropriate code to accomplish this goal.

What should you do?

A. You should use the following code segment:

```
queue.Peek(TimeSpan.FromSeconds(15))
```

B. You should use the following code segment:

```
queue.Receive(TimeSpan.FromSeconds(15))
```

C. You should use the following code segment:

```
queue.BeginPeek(TimeSpan.FromSeconds(15))
```

D. You should use the following code segment:

```
queue.BeginReceive(TimeSpan.FromSeconds(15))
```

Answer: A

Explanation: You should call the `Peek` method. This method will read the next message from the queue and block the current thread until it is read. You can control the amount of time the current thread is allowed to wait until the message becomes available by passing a `TimeSpan` instance as a parameter. When the allotted amount of time elapses, the current thread will resume. By calling the `Peek` method, you will cause a message to remain in the queue after it is read. (Literally peeking)

Incorrect answers:

B: `Receive` method because this method reads the next message from the queue and blocks the current thread until it is read. By calling the `Receive` method, you also cause the message to be deleted from the queue after it is read.

C: Calling the `BeginPeek` method will result in the method beginning to peek at the next message asynchronously and not blocking the current thread.

D: Calling the `BeginReceive` method is incorrect. The `BeginReceive` method begins reading the next message asynchronously and does not block the current thread.

QUESTION 144

You work as the Microsoft.NET developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The creation and assessment of serviced components form part of your responsibilities at Certkiller .com.

After receiving the instruction, you complied and have just created a private message queue on an application server. You have configured the message queue in such a way that whenever a message arrives in the queue, you will need to simultaneously run two executables to process the message. To this end you need to create a rule or more rules and triggers to ensure that these two executables run simultaneously when a message arrives in the queue.

What should you do?

- A. Create two rules and two triggers. Then apply each rule to only one trigger.
- B. Create a rule and two triggers. Then apply the rule to each trigger.
- C. Create one rule and one trigger. Then apply the rule to the trigger.
- D. Create two rules and one trigger. Then apply both rules to the trigger.

Answer: A

Explanation

: A trigger can execute whenever you peek at or retrieve a message from a specific message queue. It is possible that a trigger can contain more than one rule or even no rules; however, in a situation where you want the two executables to run simultaneously, you should specify the conditions that should be met to execute the rule's action. By creating a trigger for each rule you will be allowing the two executables to be invoked simultaneously when the triggers are executed.

Incorrect answers:

B: You should not create only one rule. You need to keep in mind that you must run two executables simultaneously and thus need to create a rule for each executable since a rule can execute at most one executable.

C: You should not create only one trigger, even though it is possible that a trigger may contain more than one rule, the trigger executes the action associated with each rule within a specified sequence. This means that the two executables will be triggered to run but not simultaneously.

D: This option will be possible, but will not allow both executables to run simultaneously.