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QUESTION & ANSWER

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Exam : **070-521CSHARP**

Title : UPG:Trans MCPD.NET
Frmwk 3.5 Dev Skil to .NET
4 Wndws App De

Version : DEMO

1. You are creating a Windows Communication Foundation (WCF) service that is implemented as follows.

(Line numbers are included for reference only.)

```
01 [ServiceContract]
02 [ServiceBehavior(IncludeExceptionDetailsInFaults = true)]
03 public class OrderService
04 {
05     [OperationContract]
06     public void SubmitOrder(Order anOrder)
07     {
08         try
09         {
10             ...
11         }
12         catch(DivideByZeroException ex)
13         {
14
15         }
16     }
17 }
```

You need to ensure that the stack trace details of the exception are not included in the error information sent to the client.

What should you do?

A. Replace line 14 with the following line.

```
throw;
```

B. Replace line 14 with the following line.

```
throw new FaultException<Order>(anOrder, ex.ToString());
```

C. After line 05, add the following line.

```
[FaultContract(typeof(FaultException<Order>))]
```

Replace line 14 with the following line.

```
throw ex;
```

D. After line 05, add the following line.

```
[FaultContract(typeof(FaultException<Order>))]
```

Replace line 14 with the following line.

```
throw new FaultException<Order>(anOrder, "Divide by zero exception");
```

Answer: D

2. You are creating a Windows Communication Foundation (WCF) service. You do not want to expose the internal implementation at the service layer.

You need to expose the following class as a service named Arithmetic with an operation named Sum.

```
public class Calculator
{
    public int Add(int x, int y)
    {
    }
}
```

Which code segment should you use?

A. [ServiceContract(Namespace="Arithmetic")]

```
public class Calculator
{
    [OperationContract(Action="Sum")]
    public int Add(int x, int y)
    {
        ...
    }
}
```

B. [ServiceContract(ConfigurationName="Arithmetic")]

```
public class Calculator
{
    [OperationContract(Action="Sum")]
    public int Add(int x, int y)
```

```
{  
    ...  
}  
}
```

C. [OperationContract(Name="Arithmetic")]

```
public class Calculator  
{  
    [OperationContract(Name="Sum")]  
    public int Add(int x, int y)  
    {  
        ...  
    }  
}
```

D. [OperationContract(Name="Arithmetic")]

```
public class Calculator  
{  
    [OperationContract(ReplyAction="Sum")]  
    public int Add(int x, int y)  
    {  
        ...  
    }  
}
```

Answer: C

3. A Windows Communication Foundation (WCF) application uses a data contract that has several data members.

You need the application to throw a `SerializationException` if any of the data members are not present when a serialized instance of the data contract is deserialized.

What should you do?

A. Add the `KnownType` attribute to the data contract. Set a default value in each of the data member

declarations.

B. Add the KnownType attribute to the data contract. Set the Order property of each data member to unique integer value.

C. Set the EmitDefaultValue property of each data member to false.

D. Set the IsRequired property of each data member to true.

Answer: D

4. You are creating a Windows Communication Foundation (WCF) service that implements operations in a RESTful manner. You need to add a delete operation.

You implement the delete method as follows.

```
void DeleteItems(string id);
```

You need to configure WCF to call this method when the client calls the service with the HTTP DELETE operation.

What should you do?

A. Add the WebInvoke(UriTemplate = "/Items/{id}", Method="DELETE") attribute to the operation.

B. Add the HttpDelete attribute to the operation.

C. Replace the string parameter with a RemovedActivityAction parameter.

D. Replace the return type with RemovedActivityAction.

Answer: A

5. You are building a client for a Windows Communication Foundation (WCF) service.

You need to create a proxy to consume this service.

Which class should you use?

A. ChannelFactory<TChannel>

B. ServiceHost

C. ClientRuntime

D. CommunicationObject

Answer: A

6. A Windows Communication Foundation (WCF) service has a callback contract. You are developing a

client application that will call this service.

You must ensure that the client application can interact with the WCF service.

What should you do?

- A. On the OperationContractAttribute, set the AsyncPattern property value to true.
- B. On the OperationContractAttribute, set the ReplyAction property value to the endpoint address of the client.
- C. On the client, create a proxy derived from DuplexClientBase<TChannel>.
- D. On the client, use GetCallbackChannel<T>.

Answer: C

7. You are consuming a Windows Communication Foundation (WCF) service in an ASP.NET Web application. The service interface is defined as follows.

```
[ServiceContract]
public interface ICatalog
{
    [OperationContract]
    [WebGet(UriTemplate = "/Catalog/Items/{id}",
            ResponseFormat = WebMessageFormat.Json)]
    string RetrieveItemDescription(int id);
}
```

The service is hosted at /Catalog.svc.

You need to call the service using jQuery to retrieve the description of an item as indicated by a variable named itemId.

Which code segment should you use?

```
A. $.get(String.format("/Catalog.svc/Catalog/Items/?id={0}", itemId)
    null,
    function (data) {
        ...
    },
    "javascript");
```

B. \$.get(String.format("/Catalog.svc/Catalog/Items/{0}", itemId),

null,

function (data) {

...

},

"json");

C. \$.get(String.format("/Catalog.svc/Catalog/Items/{0}", itemId),

null,

function (data) {

...

},

"xml");

D. \$.get(String.format("/Catalog.svc/Catalog/Items/id={0}", itemId),

null,

function (data) {

...

},

"json");

Answer: B

8. You are developing an application to update a user's social status. You need to consume the service using Windows Communication Foundation (WCF).

The client configuration is as follows.

```
<system.serviceModel>
```

```
<bindings>
```

```
<webHttpBinding>
```

```
<binding name="SocialConfig">
```

```
<security mode="TransportCredentialOnly">
```

```
<transport clientCredentialType="Basic"
```

```
?realm="Social API" />
```



```
        </security>
    </binding>
</webHttpBinding>
</bindings>
<client>
    <endpoint address="http://contoso.com"
        binding="webHttpBinding"
        bindingConfiguration="SocialConfig"
        contract="ISocialStatus"
        name="SocialClient" />
</client>
</system.serviceModel>
```

The service contract is defined as follows.

[ServiceContract]

public interface ISocialStatus

```
{
    [OperationContract]
    [WebInvoke(UriTemplate =
        "/statuses/update.xml?status={text}")]
    void UpdateStatus(string text);
}
```

Which code segment should you use to update the social status?

A. using (WebChannelFactory<ISocialStatus> factory =
 new WebChannelFactory<ISocialStatus>("SocialClient"))
{
 factory.Credentials.UserName.UserName = user.Name;
 factory.Credentials.UserName.Password = user.Password;
 ISocialStatus socialChannel = factory.CreateChannel();
 socialChannel.UpdateStatus(newStatus);
}

```
B. using (ChannelFactory<ISocialStatus> factory =  
    new WebChannelFactory<ISocialStatus>(typeof(ISocialStatus)))  
{  
    factory.Credentials.UserName.UserName = user.Name;  
    factory.Credentials.UserName.Password = user.Password;  
    ISocialStatus socialChannel = factory.CreateChannel();  
    socialChannel.UpdateStatus(newStatus);  
}
```

```
C. using (ChannelFactory<ISocialStatus> factory =  
    new ChannelFactory<ISocialStatus>("POST"))  
{  
    factory.Credentials.Windows.ClientCredential.UserName =  
        user.Name;  
    factory.Credentials.Windows.ClientCredential.SecurePassword.  
        SetAt(0, Convert.ToChar(user.Password));  
    ISocialStatus socialChannel = factory.CreateChannel();  
    socialChannel.UpdateStatus(newStatus);  
}
```

```
D. using (WebChannelFactory<ISocialStatus> factory =  
    new WebChannelFactory<ISocialStatus>(typeof(ISocialClient)))  
{  
    factory.Credentials.Windows.ClientCredential.UserName =  
        user.Name;  
    factory.Credentials.Windows.ClientCredential.SecurePassword.  
        SetAt(0, Convert.ToChar(user.Password));  
    ISocialStatus socialChannel = factory.CreateChannel();  
    socialChannel.UpdateStatus(newStatus);  
}
```

Answer: A

9. You are creating a Windows Communication Foundation (WCF) service to process orders. The data contract for the order is defined as follows.

```
[DataContract]
public class Order
{
    ...
    [DataMember]
    public string CardHolderName { get; set; }
    [DataMember]
    public string CreditCardNumber { get; set; }
}
```

You have the following requirements:

Enable the transmission of the contents of Order from the clients to the service.

Ensure that the contents of CreditCardNumber are not sent across the network in clear text.

Ensure that the contents of CreditCardNumber are accessible by the service to process the order.

You need to implement the service to meet these requirements.

What should you do?

- A. Add a DataProtectionPermission attribute to the CreditCardNumber property and set the ProtectData property to true.
- B. Convert the DataContract to a MessageContract and set the ProtectionLevel property to EncryptAndSign.
- C. Change the data type of CreditCardNumber from string to SecureString.
- D. Implement the CreditCardNumber property getter and setter. In the setter, run the value of the CreditCardNumber through the MD5CryptoServiceProvider class TransformBlock method.

Answer: B

10. A Windows Communication Foundation (WCF) client uses the following service contract. (Line numbers are included for reference only.)

```
01 [ServiceContract]
02 public interface IService
```

```
03 {  
04 [OperationContract]  
05 string Operation1();  
06 [OperationContract]  
07 string Operation2();  
08 }
```

You need to ensure that all calls to Operation1 and Operation2 from the client are encrypted and signed.

What should you do?

- A. Set the ProtectionLevel property in line 01 to EncryptAndSign.
- B. Set the ProtectionLevel property in line 04 and line 06 to Sign.
- C. Add a SecurityCriticalAttribute for each operation.
- D. Add a SecuritySafeCriticalAttribute for each operation.

Answer: A

11. A WCF service code is implemented as follows. (Line numbers are included for reference only.)

```
01 [ServiceContract]  
02 [ServiceBehavior(InstanceContextMode =  
03 InstanceContextMode.Single)]  
04 public class CalculatorService  
05 {  
06 [OperationContract]  
07 public double Calculate(double op1, string op, double op2)  
08 {  
...  
24 }  
25 }
```

You need to decrease the response time of the service.

What are two possible ways to achieve this goal? (Each correct answer presents a complete solution.

Choose two.)

- A. Change the service behavior to the following.

```
[ServiceBehavior(  
    InstanceContextMode = InstanceContextMode.Single,  
    ConcurrencyMode = ConcurrencyMode.Multiple)]
```

B. Change the service behavior to the following.

```
[ServiceBehavior(InstanceContextMode = InstanceContextMode.PerCall)]
```

C. Require the clients use threads, the Parallel Task Library, or other mechanism to issue service calls in parallel.

D. Require the clients to use async operations when calling the service.

Answer: AB

12. Your Windows Communication Foundation (WCF) client application uses HTTP to communicate with the service.

You need to enable message logging and include all security information such as tokens and nonces in logged messages.

What should you do?

A. In the application configuration file, add the logKnownPii attribute to the message logging diagnostics source and set the value of the attribute to true.

Generate the ContosoService class using the Add Service Reference wizard.

Add a reference to System.ServiceModel.Routing.dll.

Add the following code segment.

```
ContosoService client = new ContosoService();  
SoapProcessingBehavior behavior = new SoapProcessingBehavior();  
behavior.ProcessMessages = true;  
client.Endpoint.Behaviors.Add(behavior);
```

B. In the application configuration file, add the following XML segment to the system.serviceModel configuration section group.

```
<diagnostics>  
    <messageLogging logMessagesAtTransportLevel="true"  
        logEntireMessage="true" />  
</diagnostics>
```

C. In the machine configuration file, add the following XML segment to the system.serviceModel configuration section.

```
<machineSettings enableLoggingKnownPii="true" />
```

Generate the ContosoService class using the Add Service Reference wizard.

Add the following code segment.

```
ContosoService client = new ContosoService();  
client.Endpoint.Behaviors.Add(new CallbackDebugBehavior(true));
```

D. In the machine configuration file, add the following XML segment to the system.serviceModel configuration section.

```
<machineSettings enableLoggingKnownPii="true" />
```

In the application configuration file, add the logKnownPii attribute to the message logging diagnostics source and set the value of the attribute to true.

In the application configuration file, add the following XML segment to the system.serviceModel configuration section group.

```
<diagnostics>  
  <messageLogging logMessagesAtTransportLevel="true"/>  
</diagnostics>
```

Answer: D

13. A Windows Communication Foundation (WCF) service has the following contract.

```
[ServiceContract(Namespace="http://contoso.com")]
```

```
public interface IShipping
```

```
{  
  [OperationContract]  
  string DoWork(int id);  
}
```

This is one of several service contracts hosted by your application. All endpoints use SOAP 1.2 bindings with WS-Addressing 1.0. The System.ServiceModel.MessageLogging trace source in the system.diagnostics configuration section is configured with one listener.

You need to make sure that only the messages that are returned from the DoWork operation are logged.

Which XML segment should you add to the system.serviceModel/diagnostics/messageLogging/filters configuration element?

A. <add xmlns:addr="http://www.w3.org/2005/08/addressing">

//addr:Action[text() =

'http://contoso.com/IShipping/DoWorkResponse']

</add>

B. <add xmlns:soap="http://www.w3.org/2003/05/soap-envelope">

//soap:Action[text() =

'http://contoso.com/IShipping/DoWorkResponse']

</add>

C. <add xmlns:addr="http://www.w3.org/2005/08/addressing">

//addr:Action[text() =

'http://contoso.com/IShipping/DoWork']

</add>

D. <add xmlns:soap="http://www.w3.org/2003/05/soap-envelope">

//soap:Action[text() =

'http://contoso.com/IShipping/DoWork']

</add>

Answer: A

14. You are developing a Windows Communication Foundation (WCF) service that reads messages from a public non-transactional MSMQ queue.

You need to configure the service to read messages from the failed-delivery queue.

Which URI should you specify in the endpoint configuration settings of the service?

A. net.msmq://localhost/msmq\$;FailedMessages

B. net.msmq://localhost/msmq\$;DeadLetter

C. net.msmq://localhost/system\$;DeadXact

D. net.msmq://localhost/system\$;DeadLetter

Answer: D

15. A Windows Communication Foundation (WCF) service is responsible for transmitting XML documents between systems. The service has the following requirements:

It must minimize the transmission size by attaching the XML document as is without using escape characters or base64 encoding.

It must interoperate with systems that use SOAP but are not built on the .NET platform.

You need to configure the service to support these requirements.

Which message encoding should you use?

- A. Binary message encoding
- B. MTOM (Message Transmission Optimization Mechanism) message encoding
- C. Text message encoding with message version set to none
- D. Text message encoding with message version set to SOAP 1.2

Answer: B

16. You are adding a Windows Communication Foundation (WCF) service to an existing application. The application is configured as follows. (Line numbers are included for reference only.)

```
01?<configuration>
02   <system.serviceModel>
03     <services>
04       <service name="Contoso.Sales.StockService"
05         behaviorConfiguration="MetadataBehavior">
06         <host>
07           <baseAddresses>
08             <add
09               baseAddress="http://contoso.com:8080/StockService" />
10           </baseAddresses>
11         </host>
12       </service>
13     </services>
14     <behaviors>
15       <serviceBehaviors>
```


15 <behavior name="MetadataBehavior">

16 </behavior>

17 </serviceBehaviors>

18 </behaviors>

...

You need to configure the service to publish the service metadata.

Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Add the following XML segment between lines 10 and 11.

```
<endpoint?address=""  
    binding="mexHttpBinding"  
    contract="IMetadataExchange"  
/>
```

B. Add the following XML segment between lines 10 and 11.

```
<endpoint?address=""  
    binding="basicHttpBinding"  
    contract="IMetadataExchange"  
/>
```

C. Add the following XML segment between lines 15 and 16.

```
<serviceDiscovery>  
    <announcementEndpoints>  
        <endpoint address=""/>  
    </announcementEndpoints>  
</serviceDiscovery>
```

D. Add the following XML segment between lines 15 and 16

```
<serviceMetadata httpGetEnabled="true"/>
```

Answer: AD

17. Four Windows Communication Foundation (WCF) services are hosted in Microsoft Internet Information Services (IIS). No behavior configuration exists in the web.config file.

You need to configure the application so that every service and endpoint limits the number of concurrent

calls to 50 and the number of concurrent sessions to 25.

Which XML segment should you add to the system.serviceModel configuration section of the web.config file?

A. <behaviors>

```
<serviceBehaviors>
  <behavior name="*">
    <serviceThrottling maxConcurrentCalls="50" maxConcurrentSessions="25"/>
  </behavior>
</serviceBehaviors>
```

</behaviors>

B. <behaviors>

```
<serviceBehaviors>
  <behavior name="default">
    <serviceThrottling maxConcurrentCalls="50" maxConcurrentSessions="25"/>
  </behavior>
</serviceBehaviors>
```

</behaviors>

C. <behaviors>

```
<serviceBehaviors>
  <behavior name="">
    <serviceThrottling maxConcurrentCalls="50" maxConcurrentSessions="25"/>
  </behavior>
</serviceBehaviors>
```

</behaviors>

D. <behaviors>

```
<serviceBehaviors>
  <behavior name="ALL">
    <serviceThrottling maxConcurrentCalls="50" maxConcurrentSessions="25"/>
  </behavior>
</serviceBehaviors>
```

</behaviors>

Answer: C

18. The endpoint of a Windows Communication Foundation (WCF) service uses basicHttpBinding for its binding. Your company's policies have changed to require that messages not be sent in clear text.

You must ensure that all messages are encrypted when traveling across the network.

What should you do?

- A. Set the ProtectionLevel property on the service contract and update the binding attribute in the endpoint element of the configuration file to wsHttpBinding.
- B. Set the ProtectionLevel property on the service contract and update the bindingConfiguration attribute in the endpoint element of the configuration file to webHttpBinding.
- C. Set the PrincipalPermissionAttribute on the service contract and update the binding attribute in the endpoint element of the configuration file to wsHttpBinding.
- D. Set the PrincipalPermissionAttribute on the service contract and update the bindingConfiguration attribute in the endpoint element of the configuration file to wsHttpBinding.

Answer: A

19. You are creating a Windows Communication Foundation (WCF) service based on WSHttpBinding. New audit requirements dictate that callers must be authenticated on every call to ensure that their credentials have not been revoked.

You need to ensure that the service will not cache the security request token.

What should you do?

- A. Apply a ServiceBehavior attribute to the service implementation class with the InstanceContextMode property set to Single.
- B. In the message security configuration, change clientCredentialType from IssuedToken to UserName.
- C. In the message security configuration, set establishSecurityContext to false.
- D. At the end of every operation, call the SessionStateUtility.RaiseSessionEnd method.

Answer: C

20. You are moving a Windows Communication Foundation (WCF) service into production.

You need to be able to monitor the health of the service. You only want to enable all performance counter instances exposed by the ServiceModelService 4.0.0.0 counter group.

Which element should you add to the system.serviceModel section in the application configuration file?

- A. `<diagnostics performanceCounters="ServiceOnly" />`
- B. `<diagnostics wmiProviderEnabled="true" performanceCounters="Off" />`
- C. `<diagnostics performanceCounters="All" />`
- D. `<diagnostics wmiProviderEnabled="true" />`

Answer: A