

WCF Service Contract Versioning-1

Gursharan Singh Virdi

WCF Service Contract Versioning-1

Generally we provide the client with the WSDL having details of service contracts, operation contracts and data contracts.

In the real world the service contracts are bound to change over time.

In this 1st of the 2 part session we will look at the impact that such changes can have on the clients and how best we can accommodate our architecture to avoid such tight coupling of the client to the server.

WCF Service Contract Versioning-1

This session we explore why versioning may be necessary for developing WCF services. Below is a table of the impact that Service contract change can have on the clients:

Adding new parameters to an operation signature	Client is not effected.New parameters will be initialized to default value at the service.
Removing parameters from operaton signature	Client is not effected.by extra parameters passed by clients are ignored.
Modify Parameter return value types	Exception will occur if return type cannot be converted at the client side.
Add new operations	Client not effected since client will not know about the additional operations.
Removing operations	An exception will occur and message sent by client to the service are considered to be using an unknown action header

WCF Service Contract Versioning-1

A bulk of the changes don't have a direct impact on the client due to the forgiving nature of WCF. This can be a good or bad whichever way you want to look at it since you may end up getting undesirable results and still not know what or where things went wrong.

- You may unknowingly lose data from the client and not be able to detect it.
- The return type changes may work due to conversions but still the data is semantically incorrect.
- We can remove this issues by using data contracts as message input parameters and return types

We may be happy to use the version tolerance feature provided by WCF but it will be a better idea to version the Service contract incase there is are semantic changes or additional operation contracts have been added for new clients.

WCF Service Contract Versioning-1

To start with we have a CustomerItem Data contract which looks like the one below
***Refer to the attached code for the full datacontract*

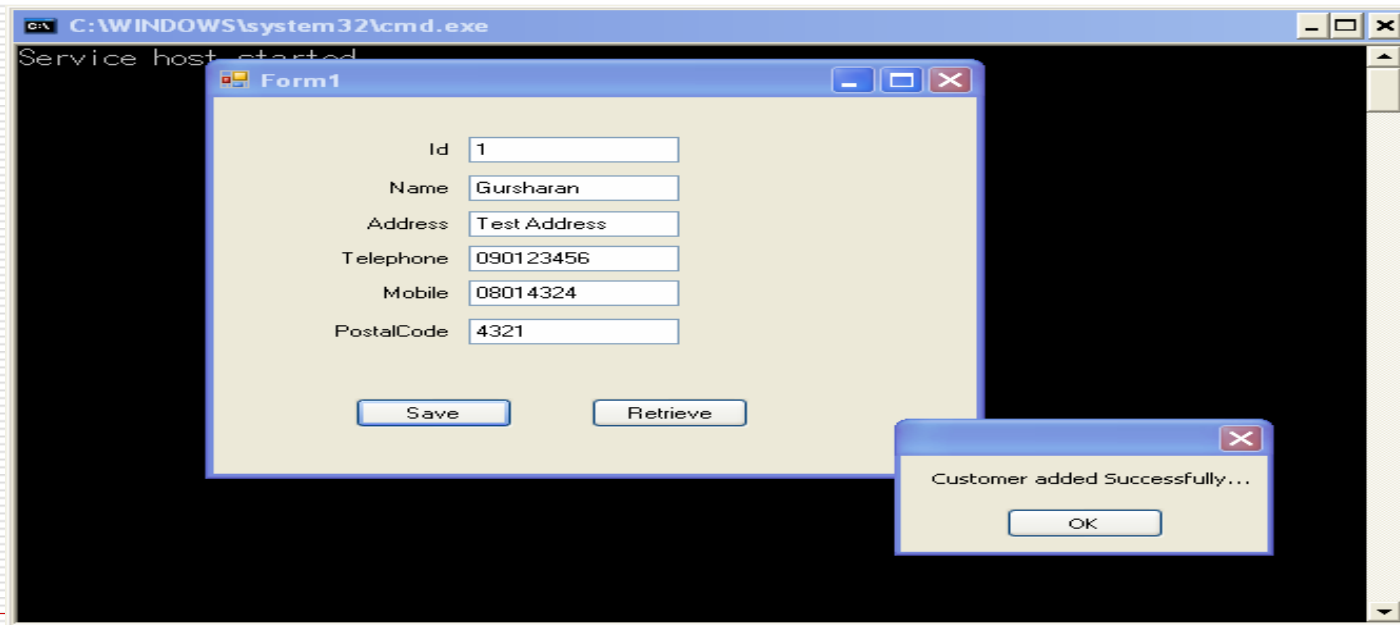
```
[DataContract]↵
    public class CustomerItem↵
    {↵
        private long custid;↵
        private string name;↵
        private string address;↵
        private string postalcode;↵
        private string telephone;↵
        private string mobile;↵
        private DateTime birthdate;↵
        ↵
        [DataMember(IsRequired = true, Order = 0)]↵
        public long CustomerID↵
        {↵
            get { return custid; }↵
            set { custid = value; }↵
        }↵
    }↵
```

WCF Service Contract Versioning-1

□ STEP-1

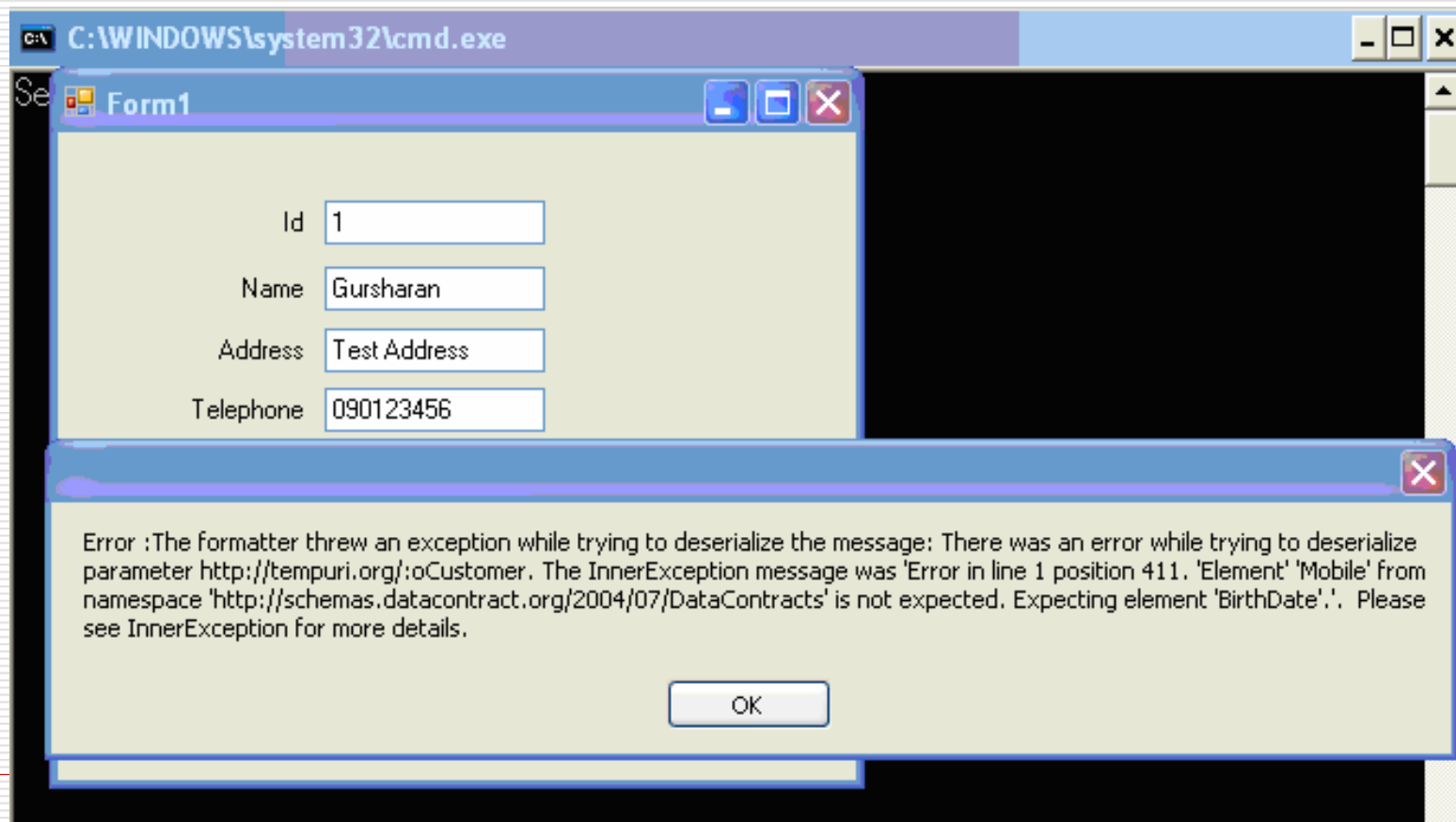
- As you can see the BirthDate datamember is commented. What that means is that the proxy generated from the WSDL will not have this information for the client. When we execute our application with the existing WSDL the result is as shown below:

- Ensure to keep the server running before executing the client.
- Comment out any additional endpoints that are generated when the proxy was generated in the process of adding the service reference from the server wsdl



WCF Service Contract Versioning-1

- **STEP-2**
 - This time we set IsRequired property to true .It throws up and exception.



WCF Service Contract Versioning-1

- Similarly we cannot remove operation contracts as it will break the client proxy. Hence we need versioning which we will discuss in my second part of the discussion in subsequent blog
 - Refer to the code attached and play around with by changing the DataContracts and Service Contracts to get a hang of how the proxy get affected.
-